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NEWS	3	APR 03 CAS coverage of exemplified prophetic substances enhanced
NEWS	4	APR 07 STN is raising the limits on saved answers
NEWS	5	APR 24 CA/CAplus now has more comprehensive patent assignee information
NEWS	6	USPATFULL and USPAT2 enhanced with patent assignment/reassignment information
NEWS	7	APR 28 CAS patent authority coverage expanded
NEWS	8	APR 28 ENCOMPLIT/ENCOMPLIT2 search fields enhanced
NEWS	9	APR 28 Limits doubled for structure searching in CAS REGISTRY
NEWS	10	MAY 08 STN Express, Version 8.4, now available
NEWS	11	MAY 11 STN on the Web enhanced
NEWS	12	MAY 11 BEILSTEIN substance information now available on STN Easy
NEWS	13	MAY 14 DGENE, PCTGEN and USGENE enhanced with increased limits for exact sequence match searches and introduction of free HIT display format
NEWS	14	MAY 15 INPADOCDB and INPAFAMDB enhanced with Chinese legal status data
NEWS	15	MAY 28 CAS databases on STN enhanced with NANO super role in records back to 1992
NEWS	16	JUN 01 CAS REGISTRY Source of Registration (SR) searching enhanced on STN
NEWS	17	JUN 26 NUTRACEUT and PHARMAML no longer updated
NEWS	18	JUN 29 IMSCOPROFILE now reloaded monthly
NEWS	19	JUN 29 EPFULL adds Simultaneous Left and Right Truncation (SLART) to AB, MCLM, and TI fields
NEWS	20	JUL 09 PATDPAFULL adds Simultaneous Left and Right Truncation (SLART) to AB, CLM, MCLM, and TI fields
NEWS	21	JUL 14 USGENE enhances coverage of patent sequence location (PSL) data
NEWS	22	JUL 27 CA/CAplus enhanced with new citing references
NEWS	23	JUL 16 GBFULL adds patent backfile data to 1855
NEWS	24	JUL 21 USGENE adds bibliographic and sequence information
NEWS	25	JUL 28 EPFULL adds first-page images and applicant-cited references
NEWS	26	JUL 28 INPADOCDB and INPAFAMDB add Russian legal status data
NEWS EXPRESS	MAY 26 09	CURRENT WINDOWS VERSION IS V8.4, AND CURRENT DISCOVER FILE IS DATED 06 APRIL 2009.

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FILE 'REGISTRY' ENTERED AT 13:24:52 ON 05 AUG 2009  
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STRUCTURE FILE UPDATES: 3 AUG 2009 HIGHEST RN 1172226-62-8  
DICTIONARY FILE UPDATES: 3 AUG 2009 HIGHEST RN 1172226-62-8

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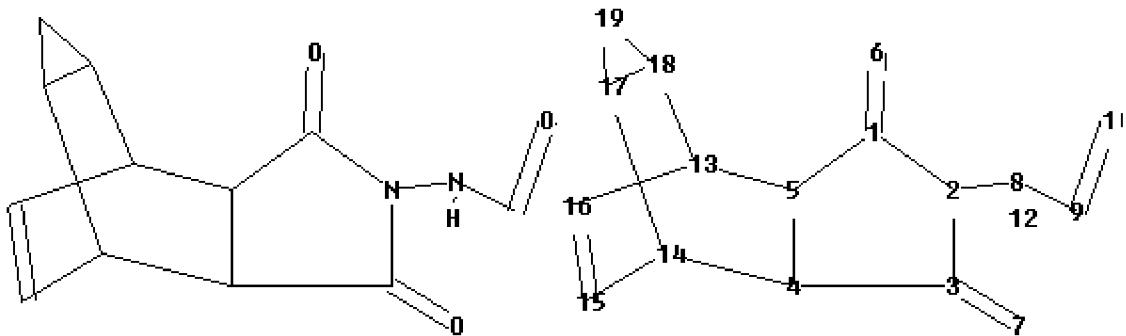
TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

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<http://www.cas.org/support/stnqgen/stndoc/properties.html>

=>  
Uploading C:\Program Files\STNEXP\Queries\10561153 formula Ia.str



chain nodes :

6 7 8 9 10 12

ring nodes :

1 2 3 4 5 13 14 15 16 17 18 19

chain bonds :

1-6 2-8 3-7 8-9 8-12 9-10

ring bonds :

1-2 1-5 2-3 3-4 4-5 4-14 5-13 13-16 13-18 14-15 14-17 15-16 17-18 17-19

exact/norm bonds :

1-2 1-5 1-6 2-3 2-8 3-4 3-7 4-5 4-14 5-13 8-9 9-10 13-18 14-17 17-18  
17-19 18-19

exact bonds :

8-12 13-16 14-15 15-16

isolated ring systems :

containing 1 :

G1:H,Ak

Match level :

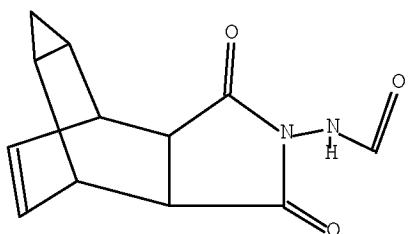
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 8:CLASS 9:CLASS 10:CLASS  
12:CLASS 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom

L1 STRUCTURE UPLOADED

=> d L1

L1 HAS NO ANSWERS

L1 STR



G1 H, Ak

Structure attributes must be viewed using STN Express query preparation.

=> file caplus		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.48	0.70

FILE 'CAPLUS' ENTERED AT 13:25:09 ON 05 AUG 2009  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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FILE COVERS 1907 - 5 Aug 2009 VOL 151 ISS 6  
FILE LAST UPDATED: 4 Aug 2009 (20090804/ED)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009  
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

CAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2009.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

The ALL, BIB, MAX, and STD display formats in the CA/CAplus family of databases have been updated to include new citing references information. This enhancement may impact record import into database management software. For additional information, refer to NEWS 22.

=> s L1 SSS full  
REGISTRY INITIATED  
Substance data SEARCH and crossover from CAS REGISTRY in progress...  
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 13:25:16 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 121 TO ITERATE

100.0% PROCESSED 121 ITERATIONS 68 ANSWERS  
SEARCH TIME: 00.00.01

L2

68 SEA SSS FUL L1

L3

27 L2

=> d ibib abs hitstr 1

L3 ANSWER 1 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2009:846114 CAPLUS Full-text  
DOCUMENT NUMBER: 151:92851  
TITLE: Method using lifespan-altering compounds for altering  
the lifespan of eukaryotic organisms, and screening  
for such compounds  
INVENTOR(S): Goldfarb, David Scott  
PATENT ASSIGNEE(S): University of Rochester, USA  
SOURCE: U.S. Pat. Appl. Publ., 57pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20090163545 A1		20090625	US 2008-XP341615	20081222
PRIORITY APPLN. INFO.:			US 2007-16362P	20071221
			US 2008-23801P	20080125

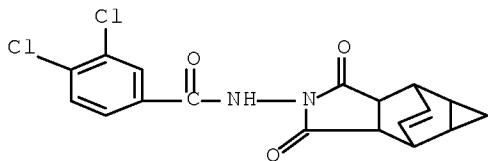
AB The invention discloses a method for altering the lifespan of a eukaryotic organism. The method comprises the steps of providing a lifespan-altering compound, and administering an effective amount of the compound to a eukaryotic organism, such that the lifespan of the organism is altered. In one embodiment, the compound is identified using the DeaD assay. [This abstract record is one of 20 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.]

IT 879504-84-4

RL: PAC (Pharmacological activity); BIOL (Biological study)  
(method using lifespan-altering compds. for altering lifespan of  
eukaryotic organisms, and screening for such compds.)

RN 879504-84-4 CAPLUS

CN Benzamide, 3,4-dichloro-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



=>

=> d ibib abs hitstr 2-

YOU HAVE REQUESTED DATA FROM 26 ANSWERS - CONTINUE? Y/(N):y

L3 ANSWER 2 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2009:846111 CAPLUS Full-text  
DOCUMENT NUMBER: 151:92848  
TITLE: Method using lifespan-altering compounds for altering the lifespan of eukaryotic organisms, and screening for such compounds  
INVENTOR(S): Goldfarb, David Scott  
PATENT ASSIGNEE(S): University of Rochester, USA  
SOURCE: U.S. Pat. Appl. Publ., 57pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20090163545 A1	20090625	US 2008-XM341615	20081222	
PRIORITY APPLN. INFO.:		US 2007-16362P	20071221	
		US 2008-23801P	20080125	

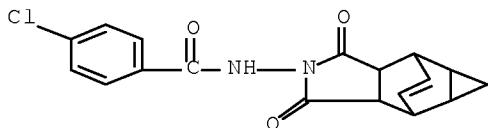
AB The invention discloses a method for altering the lifespan of a eukaryotic organism. The method comprises the steps of providing a lifespan-altering compound, and administering an effective amount of the compound to a eukaryotic organism, such that the lifespan of the organism is altered. In one embodiment, the compound is identified using the DeaD assay. [This abstract record is one of 20 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.]

IT 313270-75-6

RL: PAC (Pharmacological activity); BIOL (Biological study)  
(method using lifespan-altering compds. for altering lifespan of eukaryotic organisms, and screening for such compds.)

RN 313270-75-6 CAPLUS

CN Benzamide, 4-chloro-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



L3 ANSWER 3 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2009:846110 CAPLUS Full-text  
DOCUMENT NUMBER: 151:92847  
TITLE: Method using lifespan-altering compounds for altering the lifespan of eukaryotic organisms, and screening for such compounds  
INVENTOR(S): Goldfarb, David Scott  
PATENT ASSIGNEE(S): University of Rochester, USA  
SOURCE: U.S. Pat. Appl. Publ., 57pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20090163545 A1		20090625	US 2008-XL341615	20081222
PRIORITY APPLN. INFO.:			US 2007-16362P	20071221
			US 2008-23801P	20080125

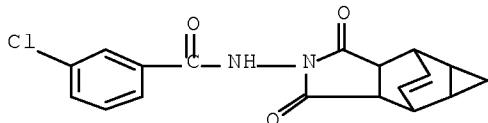
AB The invention discloses a method for altering the lifespan of a eukaryotic organism. The method comprises the steps of providing a lifespan-altering compound, and administering an effective amount of the compound to a eukaryotic organism, such that the lifespan of the organism is altered. In one embodiment, the compound is identified using the DeaD assay. [This abstract record is one of 20 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.]

IT 342417-71-4

RL: PAC (Pharmacological activity); BIOL (Biological study)  
(method using lifespan-altering compds. for altering lifespan of eukaryotic organisms, and screening for such compds.)

RN 342417-71-4 CAPLUS

CN Benzamide, 3-chloro-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



L3 ANSWER 4 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2009:846102 CAPLUS Full-text

DOCUMENT NUMBER: 151:92839

TITLE: Method using lifespan-altering compounds for altering the lifespan of eukaryotic organisms, and screening for such compounds

INVENTOR(S): Goldfarb, David Scott

PATENT ASSIGNEE(S): University of Rochester, USA

SOURCE: U.S. Pat. Appl. Publ., 57pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20090163545 A1		20090625	US 2008-XD341615	20081222
PRIORITY APPLN. INFO.:			US 2007-16362P	20071221
			US 2008-23801P	20080125

AB The invention discloses a method for altering the lifespan of a eukaryotic organism. The method comprises the steps of providing a lifespan-altering compound, and administering an effective amount of the compound to a eukaryotic organism, such that the lifespan of the organism is altered. In one embodiment, the compound is identified using the DeaD assay. [This abstract record is one of 20 records for this document necessitated by the

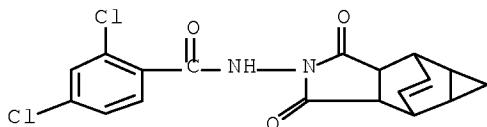
large number of index entries required to fully index the document and publication system constraints.]

IT 323177-90-8

RL: PAC (Pharmacological activity); BIOL (Biological study)  
(method using lifespan-altering compds. for altering lifespan of eukaryotic organisms, and screening for such compds.)

RN 323177-90-8 CAPLUS

CN Benzamide, 2,4-dichloro-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



L3 ANSWER 5 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2009:769551 CAPLUS Full-text

DOCUMENT NUMBER: 151:70320

TITLE: Method using lifespan-altering compounds for altering the lifespan of eukaryotic organisms, and screening for such compounds

INVENTOR(S): Goldfarb, David Scott

PATENT ASSIGNEE(S): University of Rochester, USA

SOURCE: U.S. Pat. Appl. Publ., 57pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20090163545	A1	20090625	US 2008-341615	20081222
WO 2009086303	A2	20090709	WO 2008-US88016	20081222
W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRIORITY APPLN. INFO.: US 2007-16362P P 20071221  
US 2008-23801P P 20080125

AB The invention discloses a method for altering the lifespan of a eukaryotic organism. The method comprises the steps of providing a lifespan-altering compound, and administering an effective amount of the compound to a eukaryotic organism, such that the lifespan of the organism is altered. In one embodiment, the compound is identified using the Dead assay. [This abstract record is one of 20 records for this document necessitated by the

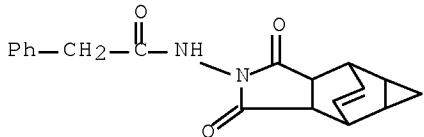
large number of index entries required to fully index the document and publication system constraints.]

IT 342417-72-5 432022-23-6

RL: PAC (Pharmacological activity); BIOL (Biological study)  
(method using lifespan-altering compds. for altering lifespan of eukaryotic organisms, and screening for such compds.)

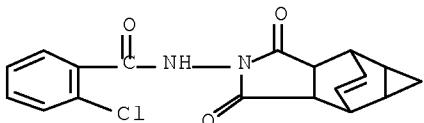
RN 342417-72-5 CAPLUS

CN Benzeneacetamide, N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



RN 432022-23-6 CAPLUS

CN Benzamide, 2-chloro-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



L3 ANSWER 6 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2009:693982 CAPLUS Full-text  
DOCUMENT NUMBER: 151:77906  
TITLE: Preparation of crystalline St-246 monohydrate as poxvirus inhibitors  
INVENTOR(S): Dai, Qiuyun; Dong, Mingxin; Hu, Jie  
PATENT ASSIGNEE(S): Research Institute of Bioengineering, Academy of Military Medical Sciences, The Chinese People's Liberation Army, Peop. Rep. China  
SOURCE: Faming Zhanli Shengqing Gongkai Shuomingshu, 18pp.  
CODEN: CNXXEV  
DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CN 101445478	A	20090603	CN 2008-10118686	20080822
PRIORITY APPLN. INFO.:			CN 2008-10118686	20080822

OTHER SOURCE(S): CASREACT 151:77906

AB The invention relates to ST-246·H<sub>2</sub>O compound. ST-246·H<sub>2</sub>O compound can be prepared by reacting 3a,4,4a,5,5a,6-hexahydro-4,6-etheno-1H-cycloprop[f]isobenzofuran-1,3(3aH)-dione (preparation given), with p-

trifluoromethylbenzoic acid hydrazide in the presence of organic base and organic solvent under nitrogen protection and refluxing. Organic base is diisopropylethylamine. Organic solvent is anhydrous ethanol or isopropanol. The invention also relates to ST-246·H<sub>2</sub>O monoclinic system which has the following characteristics: space group: C2/c; lattice parameters: a=28.724(2), b=10.533(1), c=12.902(a) angstrom,  $\beta=112.18(1)^\circ$ ; cell volume: V=3614.7(6) angstrom<sup>3</sup>; intracellular mol. number Z=8. ST-246·H<sub>2</sub>O monoclinic crystals can be prepared by refluxing ST-246 in organic solvent under heating, adding warm water, cooling at 0-4° for 1-8 h, filtrating, washing, drying at 45-70° for 4-48 h, wherein organic solvent is isopropanol, Et acetate or 90-100% ethanol solution. The invention further relates to anti-variola virus drugs containing ST-246·H<sub>2</sub>O as active ingredient. The inventive ST-246·H<sub>2</sub>O compound has advantages of good stability, no hygroscopic effect, no caking after micronization and high bioavailability.

IT 1162664-19-3P

RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

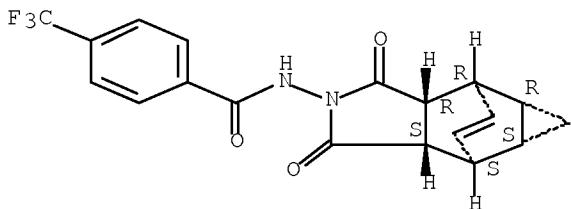
(crystal structure, drug candidate; preparation of crystalline St-246 monohydrate

as poxvirus inhibitors)

RN 1162664-19-8 CAPLUS

CN INDEX NAME NOT YET ASSIGNED

Relative stereochemistry.



● H<sub>2</sub>O

IT 869572-92-9P, St-246

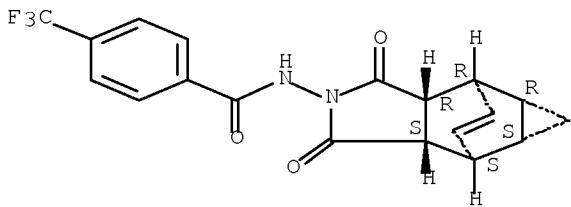
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(drug candidate; preparation of crystalline St-246 monohydrate as poxvirus inhibitors)

RN 869572-92-9 CAPLUS

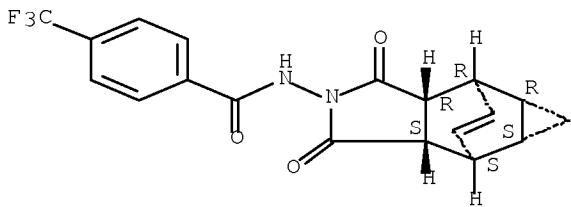
CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel-(CA INDEX NAME)

Relative stereochemistry.



L3 ANSWER 7 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2009:585358 CAPLUS [Full-text](#)  
 DOCUMENT NUMBER: 151:115681  
 TITLE: ST-246 antiviral efficacy in a nonhuman primate monkeypox model: determination of the minimal effective dose and human dose justification  
 AUTHOR(S): Jordan, Robert; Goff, Arthur; Frimm, Annie; Corrado, Michael L.; Hensley, Lisa E.; Byrd, Chelsea M.; Mucker, Eric; Shamblin, Josh; Bolken, Tove' C.; Wlazlowski, Carly; Johnson, Wendy; Chapman, Jennifer; Twenhafel, Nancy; Tyavanagimatt, Shanthakumar; Amantana, Adams; Chinsangaram, Jarasvech; Hruby, Dennis E.; Huggins, John  
 CORPORATE SOURCE: SIGA Technologies, Corvallis, OR, USA  
 SOURCE: Antimicrobial Agents and Chemotherapy (2009), 53(5), 1817-1822  
 CODEN: AMACQ; ISSN: 0066-4804  
 PUBLISHER: American Society for Microbiology  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Therapeutics for the treatment of pathogenic orthopoxvirus infections are being sought. In the absence of patients with disease, animal models of orthopoxvirus disease are essential for evaluation of the efficacies of antiviral drugs and establishment of the appropriate dose and duration of human therapy. Infection of nonhuman primates (NHP) by the i.v. injection of monkeypox virus has been used to evaluate a promising therapeutic drug candidate, ST-246. ST-246 administered at 3 days postinfection (which corresponds to the secondary viremia stage of disease) at four different doses (from 100 mg/kg of body weight down to 3 mg/kg) once a day for 14 days was able to offer NHP 100% protection from a lethal infection with monkeypox virus and reduce the viral load and lesion formation. In NHP, the administration of ST-246 at a dose of 10 mg/kg/day for 14 days resulted in levels of blood exposure comparable to the levels attained in humans administered 400 mg in the fed state. These results suggest that administration of an oral dosage of 400 mg once daily for 14 days will be effective for the prevention or treatment of smallpox or monkeypox infections in humans.  
 IT 869572-92-9, ST-246  
 RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (ST-246 antiviral efficacy in nonhuman primate monkeypox model)  
 RN 869572-92-9 CAPLUS  
 CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel-(CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 8 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2009:299685 CAPLUS Full-text  
 DOCUMENT NUMBER: 150:530404  
 TITLE: In vitro efficacy of ST246 against smallpox and monkeypox  
 AUTHOR(S): Smith, Scott K.; Olson, Victoria A.; Karem, Kevin L.; Jordan, Robert; Hruby, Dennis E.; Damon, Inger K.  
 CORPORATE SOURCE: Poxvirus Team, Poxvirus and Rabies Branch, Division of Viral and Rickettsial Diseases, Centers for Disease Control and Prevention, National Center for Zoonotic, Viral, and Enteric Diseases, Atlanta, GA, USA  
 SOURCE: Antimicrobial Agents and Chemotherapy (2009), 53(3), 1007-1012  
 CODEN: AMACQ; ISSN: 0066-4804  
 PUBLISHER: American Society for Microbiology  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Since the eradication of smallpox and the cessation of routine childhood vaccination for smallpox, the proportion of the world's population susceptible to infection with orthopoxviruses, such as variola virus (the causative agent of smallpox) and monkeypox virus, has grown substantially. In the United States, the only vaccines for smallpox licensed by the Food and Drug Administration (FDA) have been live virus vaccines. Unfortunately, a substantial number of people cannot receive live virus vaccines due to contraindications. Furthermore, no antiviral drugs have been fully approved by the FDA for the prevention or treatment of orthopoxvirus infection. Here, we show the inhibitory effect of one new antiviral compound, ST-246, on the in vitro growth properties of six variola virus strains and seven monkeypox virus strains. We performed multiple assays to monitor the cytopathic effect and to evaluate the reduction of viral progeny production and release in the presence of the compound ST-246 had 50% effective concns. of  $\leq 0.067 \mu\text{M}$  against variola virus and  $< 0.04 \mu\text{M}$  against monkeypox virus. In a dose-dependent manner, plaque size and comet tail formation were markedly reduced in the presence of the drug at low, noncytotoxic concns. between  $0.015$  and  $0.05 \mu\text{M}$ . Our in vitro phenotype data suggest that ST-246 inhibits variola and monkeypox viruses similarly by reducing the production and release of enveloped orthopoxvirus and support the development of ST-246 as an antiviral therapeutic compound for the treatment of severe systemic orthopoxvirus infections.

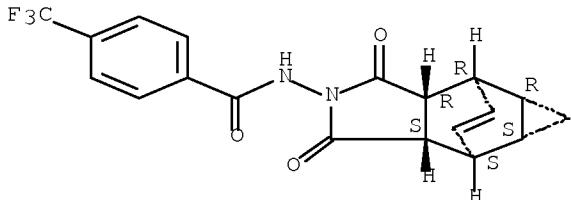
IT 869572-92-9  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (in vitro efficacy of ST246 against smallpox and monkeypox)

RN 869572-92-9 CAPLUS

CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel-

(CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 9 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2009:186683 CAPLUS Full-text

DOCUMENT NUMBER: 151:115658

TITLE: Specific targeting of the F13L protein by ST-246 affects orthopoxvirus production differently

AUTHOR(S): Duraffour, Sophie; Vigne, Solenne; Vermeire, Kurt; Garcel, Aude; Vanstreels, Els; Daelemans, Dirk; Yang, Guang; Jordan, Robert; Hruby, Dennis E.; Crance, Jean-Marc; Garin, Daniel; Andrei, Graciela; Snoeck, Robert

CORPORATE SOURCE: Rega Institute for Medical Research, Louvain, Belg.

SOURCE: Antiviral Therapy (2008), 13(8), 977-990

CODEN: ANTHFA; ISSN: 1359-6535

PUBLISHER: International Medical Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Background: ST-246 is a potent anti-orthopoxviral mol. targeting the F13L protein of vaccinia virus, which is involved in the wrapping of viruses. The discrepancy in sensitivities of several orthopoxviruses to ST-246 has raised questions about potential differences in their replicative cycles and/or the presence of another drug target. Methods: D. gradients were used to evaluate the differences between the viral cycles of vaccinia, cowpox and camelpox viruses. Also, to investigate if ST-246 inhibits a single target, we compared its activity to that of small interfering RNAs designed to silence the F13L gene (siF13Ls). Results: We showed that the spread of vaccinia virus involved both intracellular and extracellular enveloped viruses, whereas both cowpox and camelpox viruses seemed to propagate via non-enveloped intracellular forms and cell-associated viral particles. Although ST-246 exerted a clear antiviral activity by interfering with the egress of the virus from infected cells, we observed that cowpox and camelpox viruses, in contrast to vaccinia virus, could be directed towards a lytic cycle under ST-246 treatment. We specifically knocked down the F13L transcripts of vaccinia and camelpox viruses by >85%, reduced virus progeny by 90% and showed that siF13Ls affect camelpox and vaccinia virus propagation differently. Flow cytometry data validated that ST-246 interfered with the activity of the F13L protein, whereas siF13Ls silenced the F13L gene. Conclusions: Our observations support that vaccinia, cowpox and camelpox viruses exhibit different levels of sensitivity to ST-246 because of dissimilarities between their ways of propagation, and provide a better understanding of the mode of action of ST-246.

IT 869572-92-9, ST-246

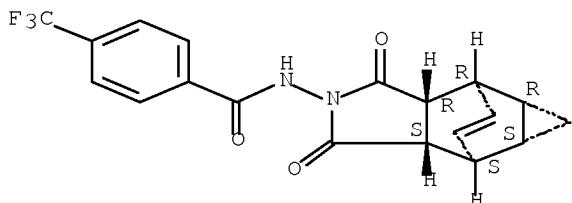
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(ST-246 specifically targeting F13L protein differently affected vaccinia, cowpox and camelpox virus production due to dissimilarities between ways of propagation by orthopoxviruses in human embryonic lung fibroblast)

RN 869572-92-9 CAPLUS

CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel-(CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 10 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2008:1300510 CAPLUS Full-text

DOCUMENT NUMBER: 149:513685

TITLE: Preparation of isoindole derivatives for treatment and prevention of orthopoxvirus infections

INVENTOR(S): Jordan, Robert; Bailey, Thomas R.; Rippin, Susan R.; Dai, Dongcheng

PATENT ASSIGNEE(S): Siga Technologies, Inc., USA

SOURCE: PCT Int. Appl., 82pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

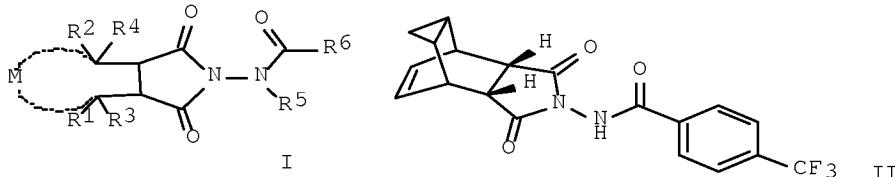
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008130348	A1	20081030	WO 2007-US9751	20070423
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
US 20070287735	A1	20071213	US 2007-785998	20070423
PRIORITY APPLN. INFO.:			US 2007-785998	A 20070423

US 2003-480182P P 20030620  
 WO 2004-US19552 W 20040618  
 US 2006-561153 A2 20060405

OTHER SOURCE(S):

MARPAT 149:513685

GI



AB The title compds. with general formula I [wherein R1, R2, and R5 = independently H or alkyl; R3 and R4 = independently H, alkyl, or R3 and R4 together with the carbons to which they are attached form an (un)substituted cyclic structure; R6 = (un)substituted alkyl, cycloalkyl, alkenyl, alkynyl, aryl, etc.; M = (un)substituted -CH<sub>2</sub>CH<sub>2</sub>- or -CH=CH-] or pharmaceutically acceptable salts thereof were prepared for the treatment or prophylaxis of viral infections and diseases associated therewith, particularly those viral infections and associated diseases cased by the orthopoxvirus. For example, compound II was prepared in a multi-step synthesis. II exhibited inhibitory activity against vaccinia virus-induced CPE with EC<sub>50</sub> value of ≤ 0.5 μM. Formulations containing II as an active ingredient were also disclosed in the invention.

IT 959923-19-4P

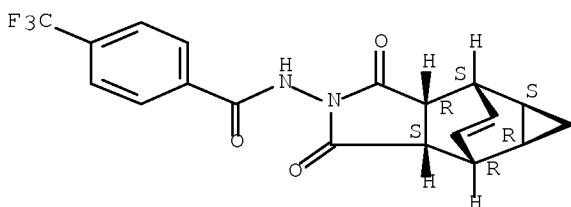
RL: PAC (Pharmacological activity); PRPH (Prophetic); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of isoindole derivs. for treatment and prevention of orthopoxvirus infections)

RN 959923-19-4 CAPLUS

CN Benzamide, N-[(3aR,4S,4aS,5aR,6R,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel-(CA INDEX NAME)

Relative stereochemistry.



IT	935765-96-1P	935765-99-4P	935766-00-0P
	935766-01-1P	935766-02-2P	935766-03-3P
	935766-04-4P	935766-05-5P	935766-06-6P

935766-07-7P 935766-09-9P 959922-75-9P  
 959922-76-0P 959922-88-4P 959922-95-3P  
 959923-00-3P 959923-03-6P 959923-11-6P  
 959923-13-8P 959923-14-9P 959923-15-0P  
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 959923-20-7P

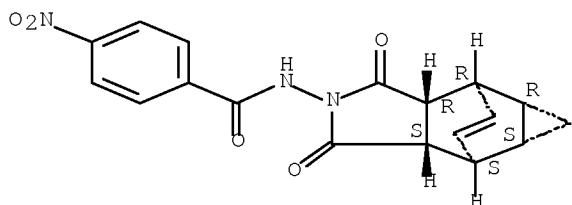
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)

(drug candidate; preparation of isoindole derivs. for treatment and  
 prevention of orthopoxvirus infections)

RN 935765-96-1 CAPLUS

CN Benzamide, 4-nitro-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-  
 octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA  
 INDEX NAME)

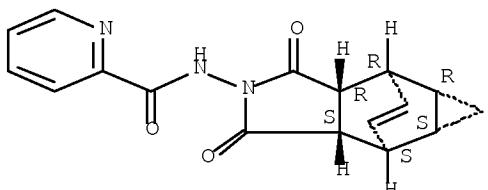
Relative stereochemistry.



RN 935765-99-4 CAPLUS

CN 2-Pyridinecarboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-  
 octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA  
 INDEX NAME)

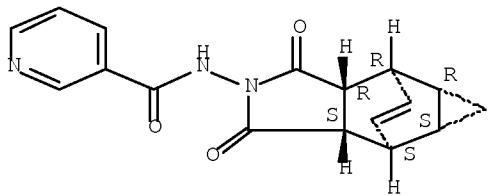
Relative stereochemistry.



RN 935766-00-0 CAPLUS

CN 3-Pyridinecarboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-  
 octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA  
 INDEX NAME)

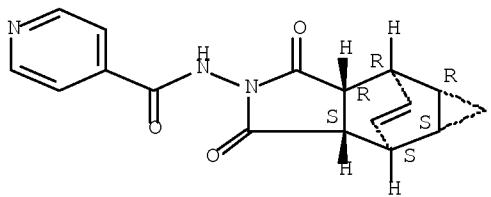
Relative stereochemistry.



RN 935766-01-1 CAPLUS

CN 4-Pyridinecarboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

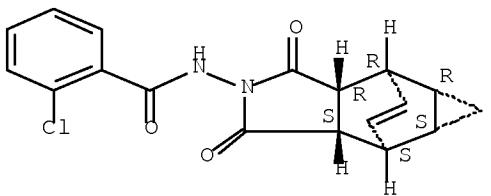
Relative stereochemistry.



RN 935766-02-2 CAPLUS

CN Benzamide, 2-chloro-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

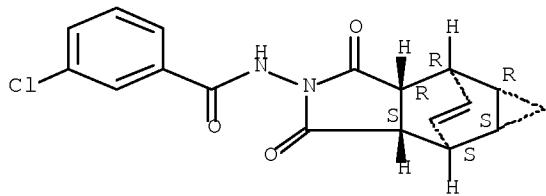
Relative stereochemistry.



RN 935766-03-3 CAPLUS

CN Benzamide, 3-chloro-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

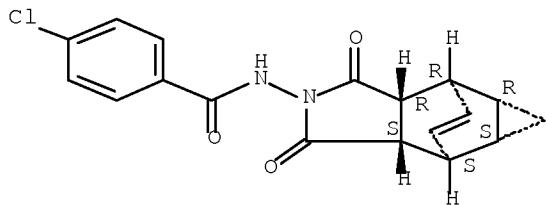
Relative stereochemistry.



RN 935766-04-4 CAPLUS

CN Benzamide, 4-chloro-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

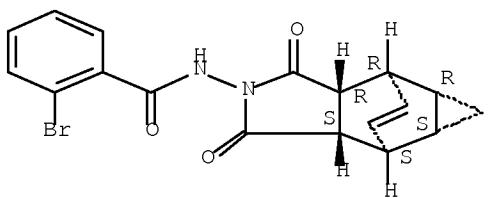
Relative stereochemistry.



RN 935766-05-5 CAPLUS

CN Benzamide, 2-bromo-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

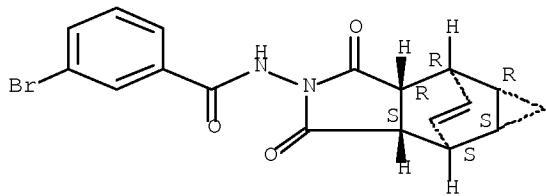
Relative stereochemistry.



RN 935766-06-6 CAPLUS

CN Benzamide, 3-bromo-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

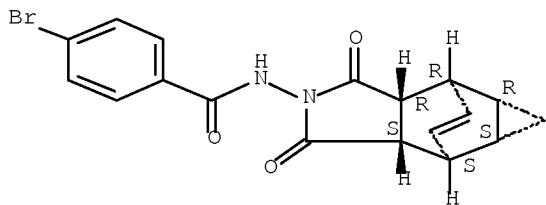
Relative stereochemistry.



RN 935766-07-7 CAPLUS

CN Benzamide, 4-bromo-N-[(3aR, 4R, 4aR, 5aS, 6S, 6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

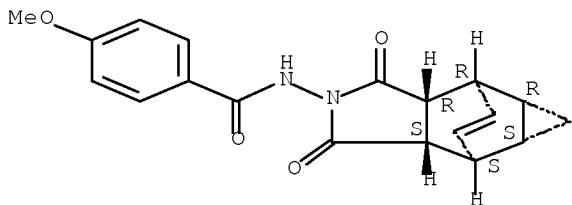
Relative stereochemistry.



RN 935766-09-9 CAPLUS

CN Benzamide, N-[(3aR, 4R, 4aR, 5aS, 6S, 6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-methoxy-, rel- (CA INDEX NAME)

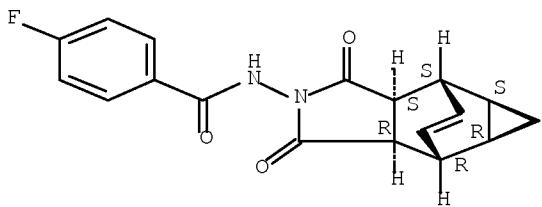
Relative stereochemistry.



RN 959922-75-9 CAPLUS

CN Benzamide, 4-fluoro-N-[(3aR, 4R, 4aR, 5aS, 6S, 6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

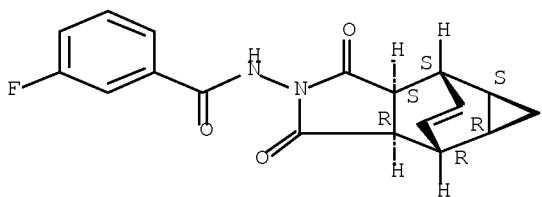
Relative stereochemistry.



RN 959922-76-0 CAPLUS

CN Benzamide, 3-fluoro-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

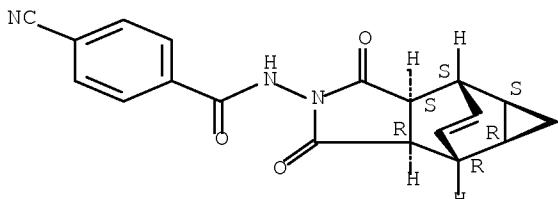
Relative stereochemistry.



RN 959922-88-4 CAPLUS

CN Benzamide, 4-cyano-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

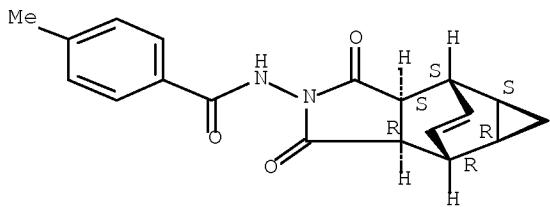
Relative stereochemistry.



RN 959922-95-3 CAPLUS

CN Benzamide, 4-methyl-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

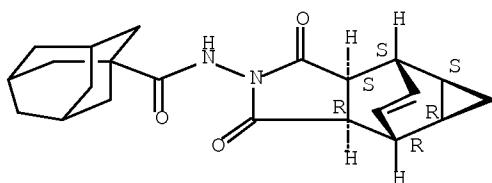
Relative stereochemistry.



RN 959923-00-3 CAPLUS

CN Tricyclo[3.3.1.13,7]decane-1-carboxamide,  
 N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

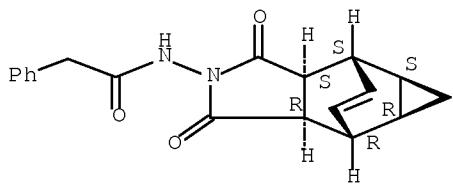
Relative stereochemistry.



RN 959923-03-6 CAPLUS

CN Benzeneacetamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

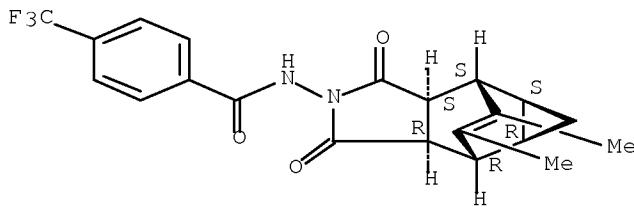
Relative stereochemistry.



RN 959923-11-6 CAPLUS

CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-7,8-dimethyl-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel- (CA INDEX NAME)

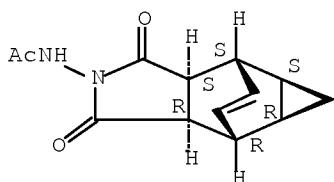
Relative stereochemistry.



RN 959923-13-8 CAPLUS

CN Acetamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

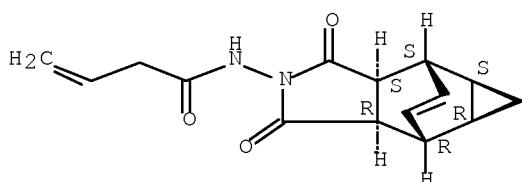
Relative stereochemistry.



RN 959923-14-9 CAPLUS

CN 3-Butenamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

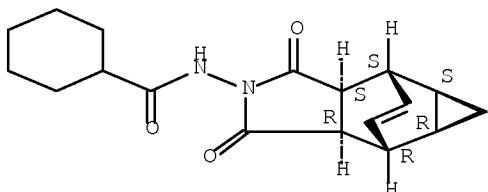
Relative stereochemistry.



RN 959923-15-0 CAPLUS

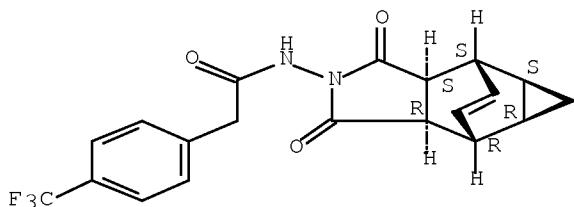
CN Cyclohexanecarboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



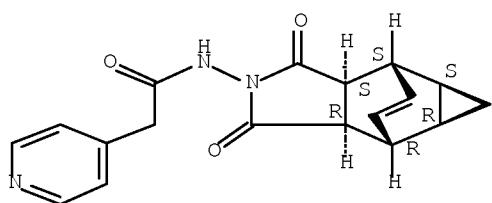
RN 959923-16-1 CAPLUS  
CN Benzeneacetamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel- (CA INDEX NAME)

Relative stereochemistry.



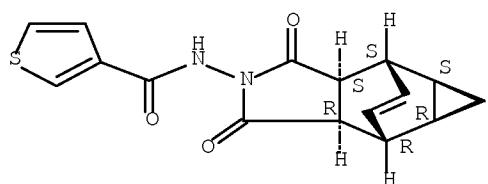
RN 959923-17-2 CAPLUS  
CN 4-Pyridineacetamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



RN 959923-18-3 CAPLUS  
CN 3-Thiophenecarboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

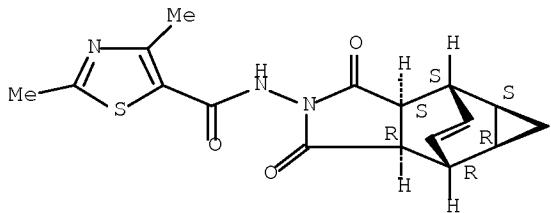
Relative stereochemistry.



RN 959923-20-7 CAPLUS  
CN 5-Thiazolecarboxamide, 2,4-dimethyl-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-

2(1H)-yl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



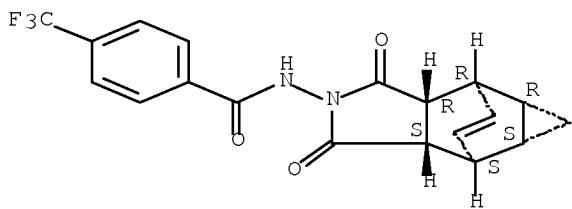
IT 869572-92-9P

RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of isoindole derivs. for treatment and prevention of orthopoxvirus infections)

RN 869572-92-9 CAPLUS

CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel- (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 11 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2008:1057356 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 150:320247

TITLE: Emerging antiviral drugs

AUTHOR(S): De Clercq, Erik

CORPORATE SOURCE: Rega Institute for Medical Research, Katholieke Universiteit, Louvain, B-3000, Belg.

SOURCE: Expert Opinion on Emerging Drugs (2008), 13(3), 393-416

CODEN: EOEDA3; ISSN: 1472-8214

PUBLISHER: Informa Healthcare

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. Foremost among the newly described antiviral agents that may be developed into drugs are, for the treatment of human papilloma virus (HPV) infections, cPrPMEDAP; for the treatment of herpes simplex virus (HSV) infections, BAY 57-1293; for the treatment of varicella-zoster virus (VZV)

infections, FV-100 (prodrug of Cf 1743); for the treatment of cytomegalovirus (CMV) infections, maribavir; for the treatment of poxvirus infections, ST-246; for the treatment of hepatitis B virus (HBV) infections, tenofovir disoproxil fumarate (TDF) (which in the meantime has already been approved in the EU); for the treatment of various DNA virus infections, the hexadecyloxypropyl (HDP) and octadecyloxyethyl (ODE) prodrugs of cidofovir; for the treatment of orthomyxovirus infections (i.e., influenza), peramivir; for the treatment of hepatitis C virus infections (i.e., hepatitis C), the protease inhibitors telaprevir and boceprevir, the nucleoside RNA replicase inhibitors (NRRIs) PSI-6130 and R1479, and various non-nucleoside RNA replicase inhibitors (NNRIs); for the treatment of human immunodeficiency virus (HIV) infections, integrase inhibitors (INIs) such as elvitegravir, nucleoside reverse transcriptase inhibitors (NRTIs) such as apricitabine, non-nucleoside reverse transcriptase inhibitors (NNRTIs) such as rilpivirine and dapivirine; and for the treatment of both HCV and HIV infections, cyclosporin A derivs. such as the non-immunosuppressive Debio-025.

IT 869572-92-9, ST-246

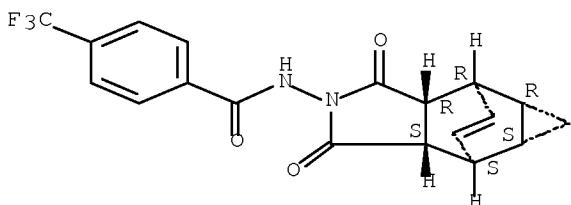
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(antiviral ST-246 may be developed into drug for treatment of patient infected with poxvirus)

RN 869572-92-9 CAPLUS

CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel-(CA INDEX NAME)

Relative stereochemistry.



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

REFERENCE COUNT: 177 THERE ARE 177 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 12 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2008:631105 CAPLUS Full-text

DOCUMENT NUMBER: 149:167212

TITLE: Evaluation of orally delivered ST-246 as postexposure prophylactic and antiviral therapeutic in an aerosolized rabbitpox rabbit model

AUTHOR(S): Nalca, Aysegul; Hatkin, Josh M.; Garza, Nicole L.; Nichols, Donald K.; Norris, Sarah W.; Hruby, Dennis E.; Jordan, Robert

CORPORATE SOURCE: Center for Aerobiological Sciences, U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID), Fort Detrick, Fort Detrick, MD, USA

SOURCE: Antiviral Research (2008), 79(2), 121-127  
CODEN: ARSRDR; ISSN: 0166-3542

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Orthopoxviruses, such as variola and monkeypox viruses, can cause severe disease in humans when delivered by the aerosol route, and thus represent significant threats to both military and civilian populations. Currently, there are no antiviral therapies approved by the U.S. Food and Drug Administration (FDA) to treat smallpox or monkeypox infection. In this study, we showed that administration of the antiviral compound ST-246 to rabbits by oral gavage, once daily for 14 days beginning 1 h postexposure (p.e.), resulted in 100% survival in a lethal aerosolized rabbitpox model used as a surrogate for smallpox. Furthermore, efficacy of delayed treatment with ST-246 was evaluated by beginning treatment on days 1, 2, 3, and 4 p.e. Although a limited number of rabbits showed less severe signs of the rabbitpox disease from the day 1 and day 2 p.e. treatment groups, their illness resolved very quickly, and the survival rates for these group of rabbits were 88% and 100%, resp. But when the treatment was started on days 3 or 4 p.e., survival was 67% and 33%, resp. This work suggests that ST-246 is a very potent antiviral compound against aerosolized rabbitpox in rabbits and should be investigated for further development for all orthopoxvirus diseases.

IT 869572-92-9, ST-246

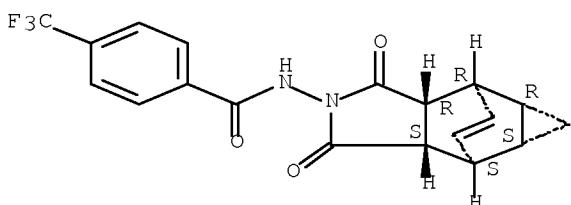
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(evaluation of orally delivered ST-246 as postexposure prophylactic and antiviral therapeutic in an aerosolized rabbitpox rabbit model)

RN 869572-92-9 CAPLUS

CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel-(CA INDEX NAME)

Relative stereochemistry.



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD  
(3 CITINGS)

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 13 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2008:562084 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 148:509383

TITLE: Single-dose safety and pharmacokinetics of ST-246, a novel orthopoxvirus egress inhibitor

AUTHOR(S): Jordan, Robert; Tien, Deborah; Bolken, Tove' C.; Jones, Kevin F.; Tyavanagimatt, Shanthakumar R.; Strasser, Josef; Frimm, Annie; Corrado, Michael L.; Strome, Phoebe G.; Hruby, Dennis E.

CORPORATE SOURCE: SIGA Technologies, Corvallis, OR, USA

SOURCE: Antimicrobial Agents and Chemotherapy (2008), 52(5),

1721-1727

CODEN: AMACQ; ISSN: 0066-4804

PUBLISHER: American Society for Microbiology  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB ST-246 is a novel, potent orthopoxvirus egress inhibitor that is being developed to treat pathogenic orthopoxvirus infections of humans. This phase I, double-blind, randomized, placebo-controlled single ascending dose study (first time with humans) was conducted to determine the safety, tolerability, and pharmacokinetics of ST-246 in healthy human volunteers. ST-246 was administered in single oral doses of 500, 1000, and 2000 mg to fasting healthy volunteers and 1,000 mg to nonfasting healthy volunteers. ST-246 was generally well tolerated with no serious adverse events, and no subject was withdrawn from the study due to ST-246. The most commonly reported drug-related adverse event was neutropenia, which was found, upon further anal., not to be treatment related. ST-246 was readily absorbed following oral administration with mean times to maximum concentration from 2 h to 3 h. Absorption was greater in nonfasting volunteers than in fasting volunteers. Administration of ST-246 resulted in exposure levels predicted to be sufficient for inhibiting orthopoxvirus replication compared to exposure levels in nonhuman primates in which ST-246 protected animals from lethal orthopoxvirus infection.

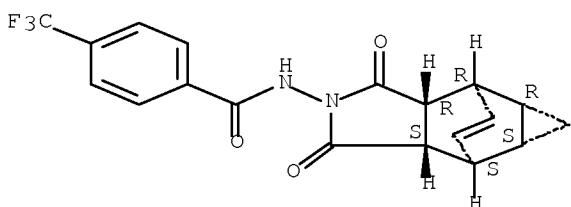
IT 869572-92-9, ST-246

RL: ADV (Adverse effect, including toxicity); PKT (Pharmacokinetics); BIOL (Biological study)  
(single-dose safety and pharmacokinetics of ST-246, a novel orthopoxvirus egress inhibitor)

RN 869572-92-9 CAPLUS

CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel-(CA INDEX NAME)

Relative stereochemistry.



OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD  
(5 CITINGS)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 14 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2008:352859 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 148:394354

TITLE: Compositions and methods for treatment of viral diseases

INVENTOR(S): Johansen, Lisa M.; Owens, Christopher M.; Mawhinney, Christina; Chappell, Todd W.; Brown, Alexander T.; Frank, Michael G.; Altmyer, Ralf

PATENT ASSIGNEE(S): Combinatorx (Singapore) Pre. Ltd., Singapore

SOURCE: PCT Int. Appl., 237pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008033466	A2	20080320	WO 2007-US19932	20070913
WO 2008033466	A3	20081211		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA				
US 20080161324	A1	20080703	US 2007-900893	20070913
PRIORITY APPLN. INFO.:			US 2006-844463P	P 20060914
			US 2006-874061P	P 20061211

AB Based on the results of the authors screen identifying compds. and combinations of compds. having antiviral activity, the present invention features compns., methods, and kits useful in the treatment of viral diseases. In certain embodiments, the viral disease is caused by a single stranded RNA virus, a flaviviridae virus, or a hepatic virus. In particular embodiments, the viral disease is viral hepatitis (e.g., hepatitis A, hepatitis B, hepatitis C, hepatitis D, hepatitis E). Also featured are screening methods for identification of novel compds. that may be used to treat a viral disease.

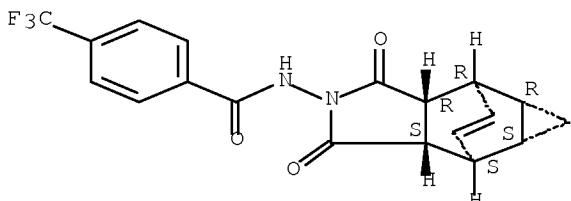
IT 869572-92-9, SIGA 246

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(compns. and methods for treatment of viral diseases)

RN 869572-92-9 CAPLUS

CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel-(CA INDEX NAME)

Relative stereochemistry.



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD  
(1 CITINGS)

L3 ANSWER 15 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2008:140397 CAPLUS Full-text

DOCUMENT NUMBER: 149:264725

TITLE: Immune responses to the smallpox vaccine given in combination with ST-246, a small-molecule inhibitor of poxvirus dissemination

AUTHOR(S): Grosenbach, Douglas W.; Jordan, Robert; King, David S.; Berhanu, Akile; Warren, Travis K.; Kirkwood-Watts, Dana L.; Tyavanagimatt, Shanthakumar; Tan, Ying; Wilson, Rebecca L.; Jones, Kevin F.; Hruby, Dennis E.

CORPORATE SOURCE: SIGA Technologies, Corvallis, OR, 97333, USA

SOURCE: Vaccine (2008), 26(7), 933-946

CODEN: VACCDE; ISSN: 0264-410X

PUBLISHER: Elsevier Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Summary: The re-emerging threat of smallpox and the emerging threat of monkeypox highlight the need for effective poxvirus countermeasures. Currently approved smallpox vaccines have unacceptable safety profiles and, consequently, the general populace is no longer vaccinated, leading to an increasingly susceptible population. ST-246, a small-mol. inhibitor of poxvirus dissemination, has been demonstrated in various animal models to be safe and effective in preventing poxviral disease. This suggests that it may also be used to improve the safety of the traditional smallpox vaccine provided that it does not inhibit vaccine-induced protective immunity. In this study, we compared the immune responses elicited by the smallpox vaccine alone or in combination with ST-246 in mice. Normal lesion formation following dermal scarification with the attenuated New York City Board of Health strain (Dryvax), commonly referred to as a vaccine "take", was not inhibited although severe lesions and systemic disease due to vaccination with the virulent Western Reserve (VV-WR) strain were prevented. The vaccine given with ST-246 did not affect cellular immune responses or neutralizing antibody titers although anti-vaccinia ELISA titers were slightly reduced. Vaccination in combination with ST-246 provided equivalent short- and long-term protection against lethal intranasal challenge with VV-WR when compared to vaccine alone. These results suggest that ST-246 does not compromise protective immunity elicited by the vaccine and provide the basis for future studies examining the efficacy of ST-246 in preventing or treating adverse events due to vaccination.

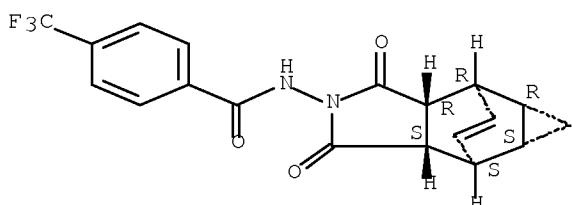
IT 869572-92-9, ST-246

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(immune responses to smallpox vaccine given in combination with ST-246)

RN 869572-92-9 CAPLUS

CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel-(CA INDEX NAME)

Relative stereochemistry.



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD  
(3 CITINGS)  
REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 16 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2008:105893 CAPLUS Full-text  
DOCUMENT NUMBER: 148:345830  
TITLE: Activity of the anti-orthopoxvirus compound ST-246  
against vaccinia, cowpox and camelpox viruses in cell  
monolayers and organotypic raft cultures  
AUTHOR(S): Duraffour, Sophie; Snoeck, Robert; de Vos, Rita; van  
den Oord, Joost J.; Crance, Jean-Marc; Garin, Daniel;  
Hruby, Dennis E.; Jordan, Robert; De Clercq, Erik;  
Andrei, Graciela  
CORPORATE SOURCE: Rega Institute For Medical Research, Louvain, Belg.  
SOURCE: Antiviral Therapy (2007), 12(8), 1205-1216  
CODEN: ANTHFA; ISSN: 1359-6535  
PUBLISHER: International Medical Press  
DOCUMENT TYPE: Journal  
LANGUAGE: English

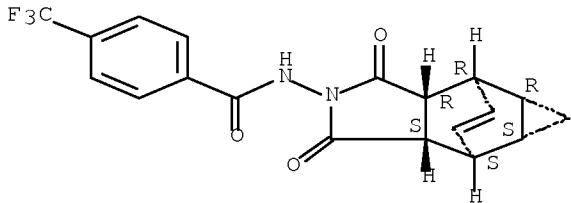
AB The potential use of variola virus as a biol. weapon has renewed efforts in  
the development of antiviral agents against orthopoxviruses. ST-246 [4-  
trifluoromethyl-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-di oxo-4,6-  
ethenocycloprop [f]isoindol-2(1H)-yl)-benzamide] is an anti-orthopoxvirus  
compound active against several orthopoxviruses including vaccinia virus (VV),  
cowpox virus (CPV), camelpox virus (CMLV), ectromelia virus (ECTV), and  
variola virus in cell culture. The compound has been shown to inhibit the  
release of extra-cellular virus by targeting the F13L W protein and to protect  
mice from VV, CPV, and ECTV orthopoxvirus-induced disease. The antiviral  
activity of ST-246 was assessed against extracellular and intracellular VV,  
CPV, and CMLV production in human embryonic lung (HEL) fibroblasts and primary  
human keratinocyte (PHK) cell monolayers, as well as in three-dimensional raft  
cultures. ST-246 inhibited preferentially the production of extracellular  
virus compared with intracellular virus production in HEL and PHK cells (for  
VV) and in PHK cells (for CMLV). In organotypic epithelial raft cultures, ST-  
246 at 20 µg/mL inhibited extracellular VV and CMLV production by 6 logs,  
whereas intracellular virus yield was reduced by 2 logs. In the case of CPV,  
both extracellular and intracellular virus production were completely  
inhibited by ST-246 at 20 µg/mL. Histol. sections of the infected rafts,  
treated with increasing amts. of drug, confirmed the antiviral activity of ST-  
246: the epithelium was protected and there was no evidence of viral  
infection. Electron microscopic examination confirmed the absence of  
intracellular enveloped virus forms in VV-, CPV-, and CMLV-infected cells  
treated with 10 µg/mL of ST-246. These data indicate that ST-246 is a potent  
anti-orthopoxvirus compound; the mode of inhibition is dependent on the virus  
and cell type.

IT 869572-92-9, ST-246  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(ST-246 exhibited antiviral activity, inhibited extracellular and  
intracellular production of vaccinia, cowpox or camelpox virus in human  
embryonic lung fibroblast and primary keratinocyte monolayer,  
organotypic epithelial raft culture)

RN 869572-92-9 CAPLUS  
CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-  
dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel-

(CA INDEX NAME)

Relative stereochemistry.



OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD  
(6 CITINGS)  
REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

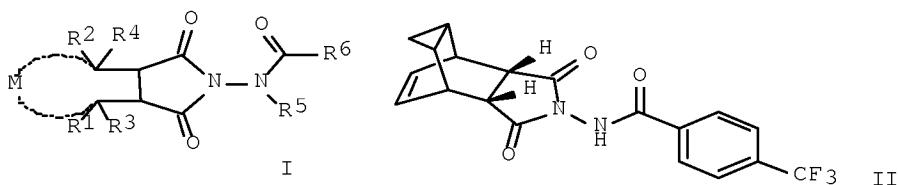
L3 ANSWER 17 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2008:9028 CAPLUS Full-text  
DOCUMENT NUMBER: 148:121578  
TITLE: Process for preparation of isoindole derivatives for  
treatment and prevention of orthopoxvirus infections  
INVENTOR(S): Jordan, Robert F.; Bailey, Thomas R.; Rippin, Susan  
R.; Dai, Dongcheng  
PATENT ASSIGNEE(S): Siga Technologies, Inc., USA  
SOURCE: U.S. Pat. Appl. Publ., 25pp., Cont.-in-part of U.S.  
Ser. No. 561,153.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 4  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20080004452	A1	20080103	US 2007-785997	20070423
WO 2004112718	A2	20041229	WO 2004-US19552	20040618
WO 2004112718	A3	20050407		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 20060235051	A1	20061019	US 2006-561153	20060405
US 20080103181	A9	20080501		
WO 2008079159	A2	20080703	WO 2007-US9750	20070423
WO 2008079159	A3	20081009		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM,				

KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG,  
 MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT,  
 RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR,  
 TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW  
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
 IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF,  
 BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW,  
 GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,  
 BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

PRIORITY APPLN. INFO.: US 2003-480182P P 20030620  
 WO 2004-US19552 W 20040618  
 US 2006-561153 A2 20060405

OTHER SOURCE(S): CASREACT 148:121578; MARPAT 148:121578  
 GI



AB This invention provides a process for the preparation of isoindole derivs. I [wherein R1, R2, and R5 = independently H or alkyl; R3 and R4 = independently H, alkyl; or R3 and R4 together with the carbons to which they are attached form an (un)substituted cyclic structure; R6 = (un)substituted alkyl, cycloalkyl, alkenyl, alkynyl, aryl, etc.; M = (un)substituted -CH<sub>2</sub>CH<sub>2</sub>- or -CH=CH-] or pharmaceutically acceptable salts thereof for the treatment or prophylaxis of viral infections and diseases associated therewith, particularly cased by the orthopoxvirus. For example, cycloheptatriene was reacted with maleic anhydride, followed by the addition of 4-(trifluoromethyl)benzhydrazide to give II. II exhibited inhibitory activity against vaccinia virus-induced CPE with EC<sub>50</sub> value of ≤ 0.5 μM. Formulations containing II as an active ingredient were also disclosed in the invention.

IT 959923-11-6P 959923-13-8P 959923-14-9P  
 959923-15-0P 959923-16-1P 959923-17-2P  
 959923-18-3P 959923-19-4P

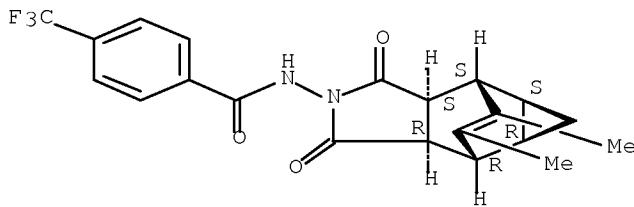
RL: PAC (Pharmacological activity); PRPH (Prophetic); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of isoindole derivs. for treatment and prevention of orthopoxvirus infections)

RN 959923-11-6 CAPLUS

CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-7,8-dimethyl-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel- (CA INDEX NAME)

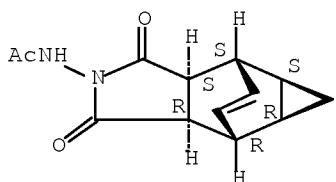
Relative stereochemistry.



RN 959923-13-8 CAPLUS

CN Acetamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

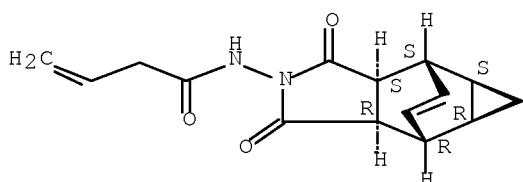
Relative stereochemistry.



RN 959923-14-9 CAPLUS

CN 3-Butenamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

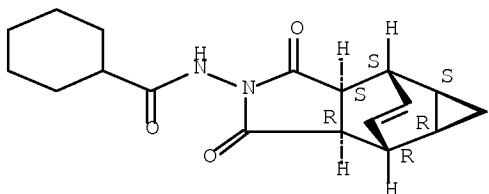
Relative stereochemistry.



RN 959923-15-0 CAPLUS

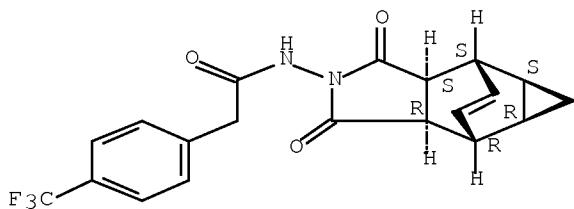
CN Cyclohexanecarboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



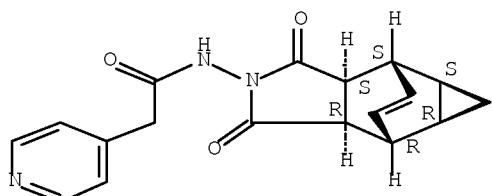
RN 959923-16-1 CAPLUS  
CN Benzeneacetamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel- (CA INDEX NAME)

Relative stereochemistry.



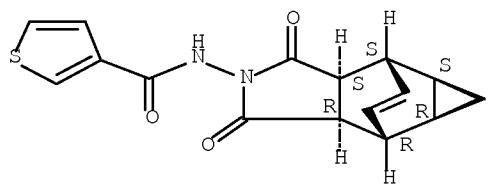
RN 959923-17-2 CAPLUS  
CN 4-Pyridineacetamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



RN 959923-18-3 CAPLUS  
CN 3-Thiophenecarboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

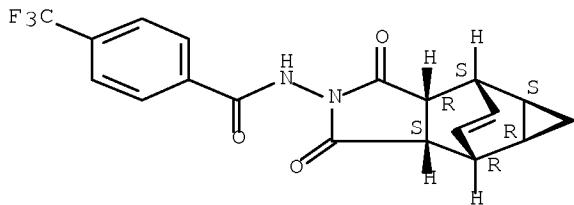
Relative stereochemistry.



RN 959923-19-4 CAPLUS  
CN Benzamide, N-[(3aR,4S,4aS,5aR,6R,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel-

(CA INDEX NAME)

Relative stereochemistry.



IT 935765-96-1P 935765-99-4P 935766-00-0P  
935766-01-1P 935766-02-2P 935766-03-3P  
935766-04-4P 935766-05-5P 935766-06-6P  
935766-07-7P 935766-09-9P 959922-75-9P  
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959923-00-3P 959923-03-6P 959923-20-7P

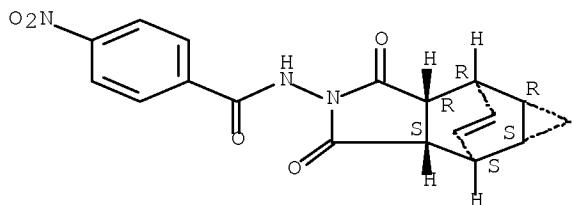
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of isoindole derivs. for treatment and prevention of orthopoxvirus infections)

RN 935765-96-1 CAPLUS

CN Benzamide, 4-nitro-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

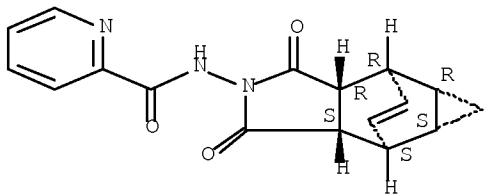
Relative stereochemistry.



RN 935765-99-4 CAPLUS

CN 2-Pyridinecarboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

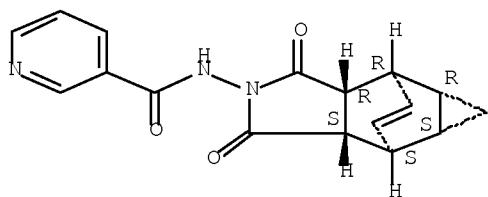
Relative stereochemistry.



RN 935766-00-0 CAPLUS

CN 3-Pyridinecarboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

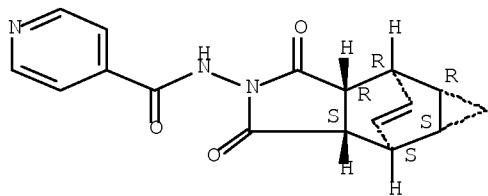
Relative stereochemistry.



RN 935766-01-1 CAPLUS

CN 4-Pyridinecarboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

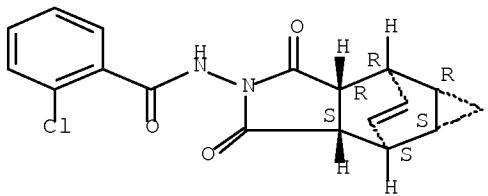
Relative stereochemistry.



RN 935766-02-2 CAPLUS

CN Benzamide, 2-chloro-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

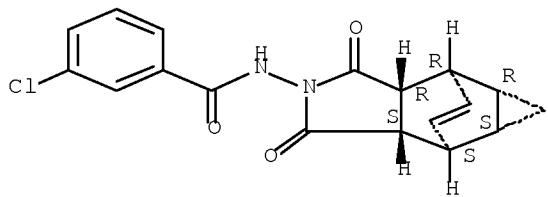
Relative stereochemistry.



RN 935766-03-3 CAPLUS

CN Benzamide, 3-chloro-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

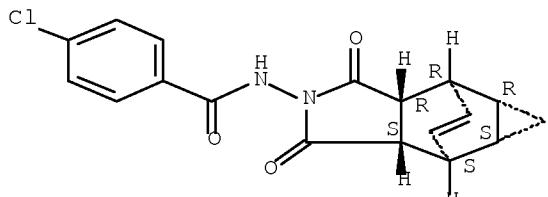
Relative stereochemistry.



RN 935766-04-4 CAPLUS

CN Benzamide, 4-chloro-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

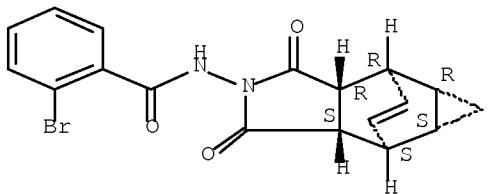
Relative stereochemistry.



RN 935766-05-5 CAPLUS

CN Benzamide, 2-bromo-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

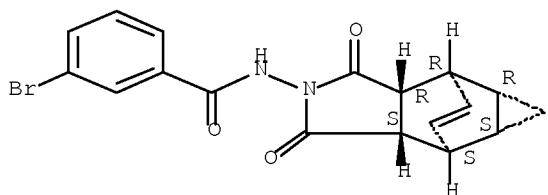
Relative stereochemistry.



RN 935766-06-6 CAPLUS

CN Benzamide, 3-bromo-N-[(3aR, 4R, 4aR, 5aS, 6S, 6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

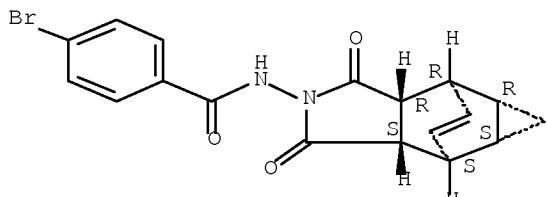
Relative stereochemistry.



RN 935766-07-7 CAPLUS

CN Benzamide, 4-bromo-N-[(3aR, 4R, 4aR, 5aS, 6S, 6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

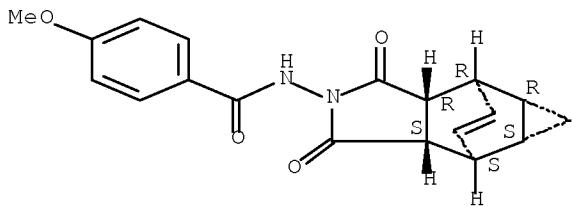
Relative stereochemistry.



RN 935766-09-9 CAPLUS

CN Benzamide, N-[(3aR, 4R, 4aR, 5aS, 6S, 6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-methoxy-, rel- (CA INDEX NAME)

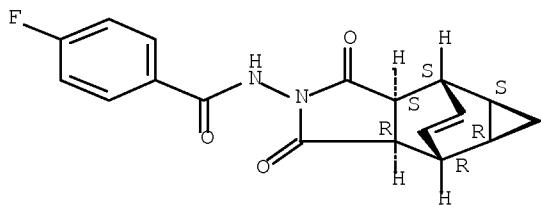
Relative stereochemistry.



RN 959922-75-9 CAPLUS

CN Benzamide, 4-fluoro-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

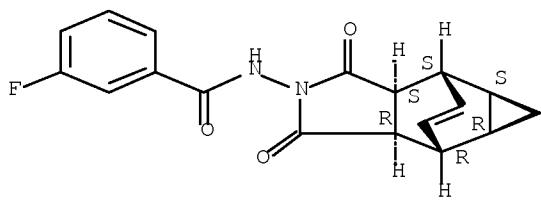
Relative stereochemistry.



RN 959922-76-0 CAPLUS

CN Benzamide, 3-fluoro-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

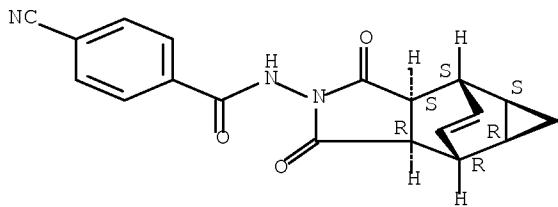
Relative stereochemistry.



RN 959922-88-4 CAPLUS

CN Benzamide, 4-cyano-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

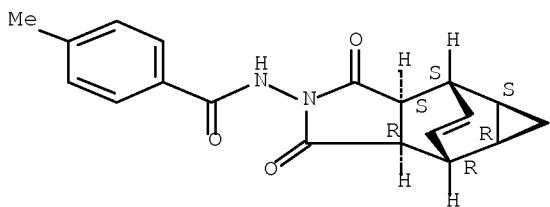
Relative stereochemistry.



RN 959922-95-3 CAPLUS

CN Benzamide, 4-methyl-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

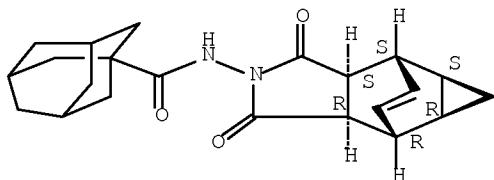
Relative stereochemistry.



RN 959923-00-3 CAPLUS

CN Tricyclo[3.3.1.13,7]decane-1-carboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

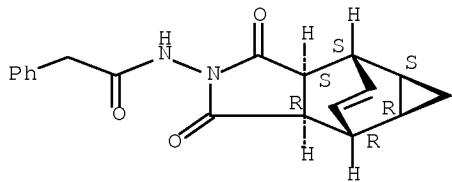
Relative stereochemistry.



RN 959923-03-6 CAPLUS

CN Benzeneacetamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

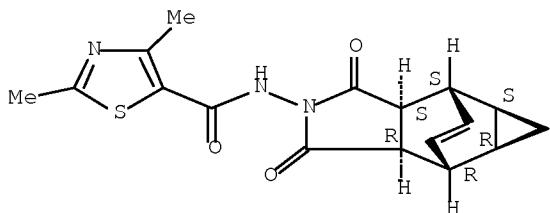
Relative stereochemistry.



RN 959923-20-7 CAPLUS

CN 5-Thiazolecarboxamide, 2,4-dimethyl-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



IT 869572-92-9P

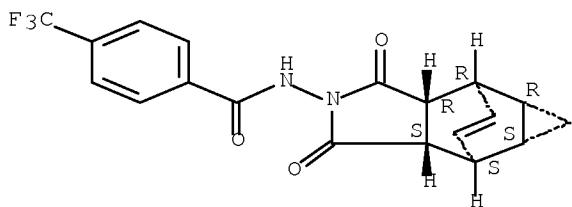
RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of isoindole derivs. for treatment and prevention of orthopoxvirus infections)

RN 869572-92-9 CAPLUS

CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel- (CA INDEX NAME)

Relative stereochemistry.



L3 ANSWER 18 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:1415989 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 148:54877

TITLE: Preparation of isoindole derivatives for treatment and prevention of orthopoxvirus infections

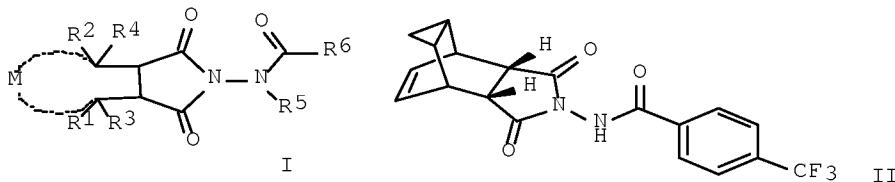
INVENTOR(S): Jordan, Robert F.; Bailey, Thomas R.; Rippin, Susan

PATENT ASSIGNEE(S): R.; Dai, Dongcheng  
 Siga Technologies, Inc., USA  
 SOURCE: U.S. Pat. Appl. Publ., 26 pp., Cont.-in-part of U.S.  
 Ser. No. 561,153.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20070287735	A1	20071213	US 2007-785998	20070423
WO 2004112718	A2	20041229	WO 2004-US19552	20040618
WO 2004112718	A3	20050407		
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US 20060235051	A1	20061019	US 2006-561153	20060405
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WO 2008130348	A1	20081030	WO 2007-US9751	20070423
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PRIORITY APPLN. INFO.: US 2003-480182P P 20030620  
 WO 2004-US19552 W 20040618  
 US 2006-561153 A2 20060405  
 US 2007-785998 A 20070423

OTHER SOURCE(S): CASREACT 148:54877; MARPAT 148:54877



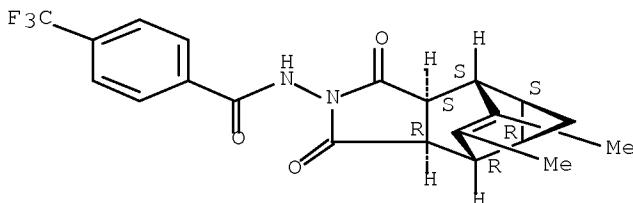
AB The title compds. with general formula I [wherein R1, R2, and R5 = independently H or alkyl; R3 and R4 = independently H, alkyl, or R3 and R4 together with the carbons to which they are attached form an (un)substituted cyclic structure; R6 = (un)substituted alkyl, cycloalkyl, alkenyl, alkynyl, aryl, etc.; M = (un)substituted -CH<sub>2</sub>CH<sub>2</sub>- or -CH=CH-] or pharmaceutically acceptable salts thereof were prepared for the treatment or prophylaxis of viral infections and diseases associated therewith, particularly those viral infections and associated diseases caused by the orthopoxvirus. For example, compound II was prepared in a multi-step synthesis. II exhibited inhibitory activity against vaccinia virus-induced CPE with EC<sub>50</sub> value of ≤ 0.5 μM. Formulations containing II as an active ingredient were also disclosed in the invention.

IT 959923-11-6P 959923-13-8P 959923-14-9P  
 959923-15-0P 959923-16-1P 959923-17-2P  
 959923-18-3P 959923-19-4P  
 RL: PAC (Pharmacological activity); PRPH (Prophetic); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (drug candidate; preparation of isoindole derivs. for treatment and prevention of orthopoxvirus infections)

RN 959923-11-6 CAPLUS

CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-7,8-dimethyl-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel- (CA INDEX NAME)

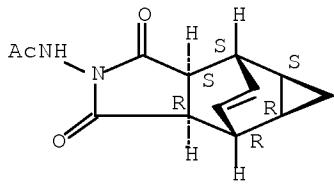
Relative stereochemistry.



RN 959923-13-8 CAPLUS

CN Acetamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

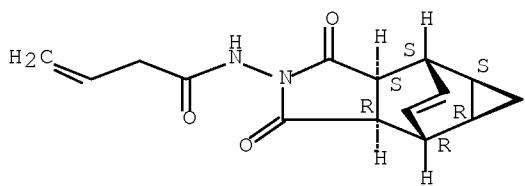
Relative stereochemistry.



RN 959923-14-9 CAPLUS

CN 3-Butenamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

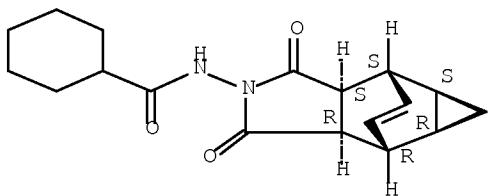
Relative stereochemistry.



RN 959923-15-0 CAPLUS

CN Cyclohexanecarboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

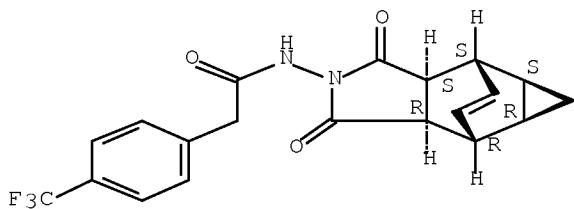
Relative stereochemistry.



RN 959923-16-1 CAPLUS

CN Benzeneacetamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel- (CA INDEX NAME)

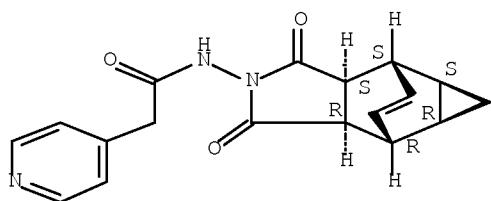
Relative stereochemistry.



RN 959923-17-2 CAPLUS

CN 4-Pyridineacetamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

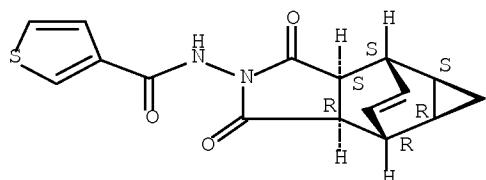
Relative stereochemistry.



RN 959923-18-3 CAPLUS

CN 3-Thiophenecarboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

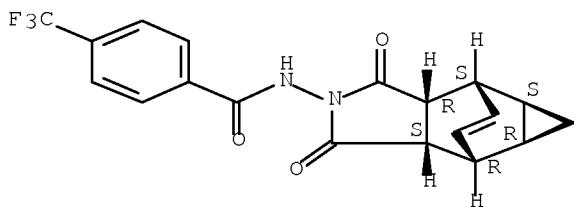
Relative stereochemistry.



RN 959923-19-4 CAPLUS

CN Benzamide, N-[(3aR,4S,4aS,5aR,6R,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel- (CA INDEX NAME)

Relative stereochemistry.



IT 935765-96-1P 935765-99-4P 935766-00-0P  
 935766-01-1P 935766-02-2P 935766-03-3P  
 935766-04-4P 935766-05-5P 935766-06-6P  
 935766-07-7P 935766-09-9P 959922-75-9P  
 959922-76-0P 959922-88-4P 959922-95-3P  
 959923-00-3P 959923-03-6P 959923-20-7P

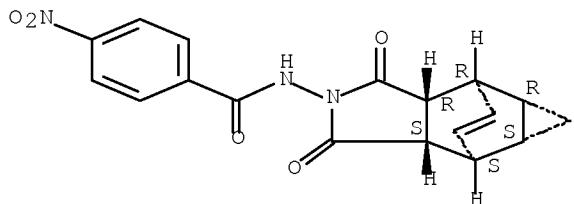
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of isoindole derivs. for treatment and prevention of orthopoxvirus infections)

RN 935765-96-1 CAPLUS

CN Benzamide, 4-nitro-N-[(3aR, 4R, 4aR, 5aS, 6S, 6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

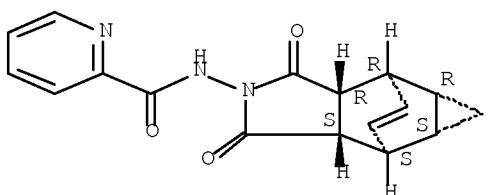
Relative stereochemistry.



RN 935765-99-4 CAPLUS

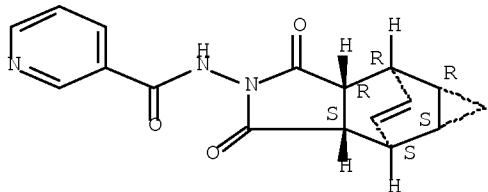
CN 2-Pyridinecarboxamide, N-[(3aR, 4R, 4aR, 5aS, 6S, 6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



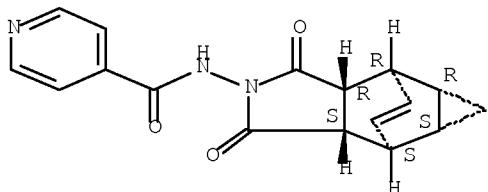
RN 935766-00-0 CAPLUS  
CN 3-Pyridinecarboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



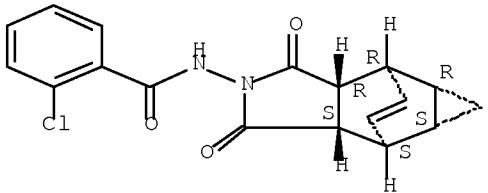
RN 935766-01-1 CAPLUS  
CN 4-Pyridinecarboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



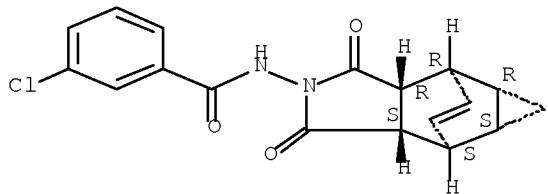
RN 935766-02-2 CAPLUS  
CN Benzamide, 2-chloro-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



RN 935766-03-3 CAPLUS  
CN Benzamide, 3-chloro-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

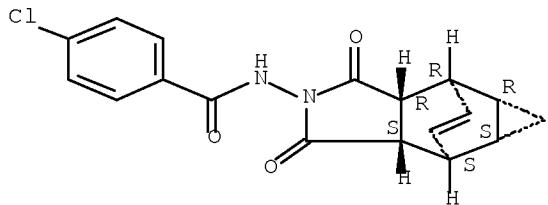
Relative stereochemistry.



RN 935766-04-4 CAPLUS

CN Benzamide, 4-chloro-N-[ (3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

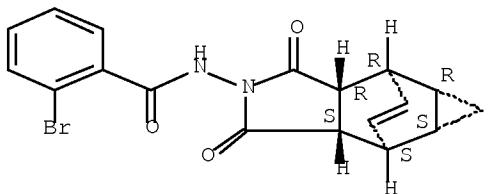
Relative stereochemistry.



RN 935766-05-5 CAPLUS

CN Benzamide, 2-bromo-N-[ (3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

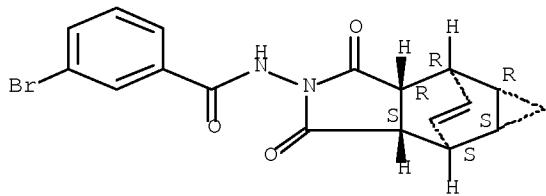
Relative stereochemistry.



RN 935766-06-6 CAPLUS

CN Benzamide, 3-bromo-N-[ (3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

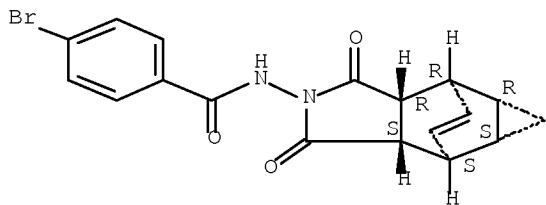
Relative stereochemistry.



RN 935766-07-7 CAPLUS

CN Benzamide, 4-bromo-N-[(3aR, 4R, 4aR, 5aS, 6S, 6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

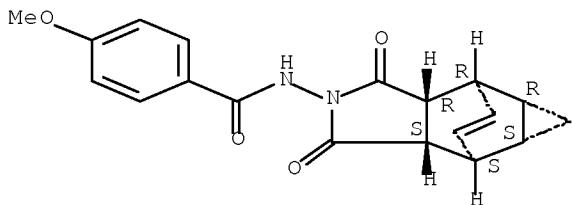
Relative stereochemistry.



RN 935766-09-9 CAPLUS

CN Benzamide, N-[(3aR, 4R, 4aR, 5aS, 6S, 6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-methoxy-, rel- (CA INDEX NAME)

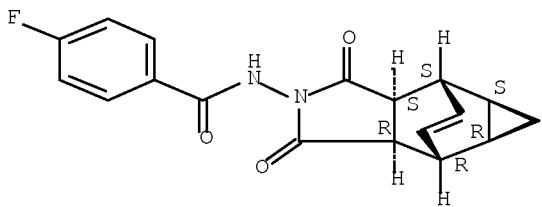
Relative stereochemistry.



RN 959922-75-9 CAPLUS

CN Benzamide, 4-fluoro-N-[(3aR, 4R, 4aR, 5aS, 6S, 6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

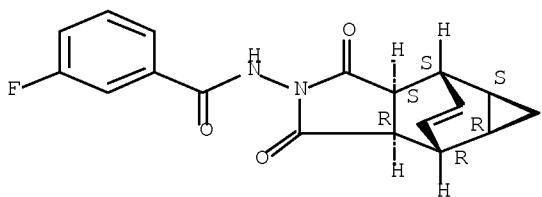
Relative stereochemistry.



RN 959922-76-0 CAPLUS

CN Benzamide, 3-fluoro-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

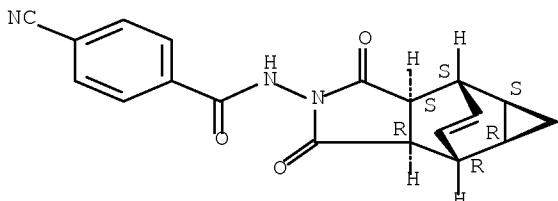
Relative stereochemistry.



RN 959922-88-4 CAPLUS

CN Benzamide, 4-cyano-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

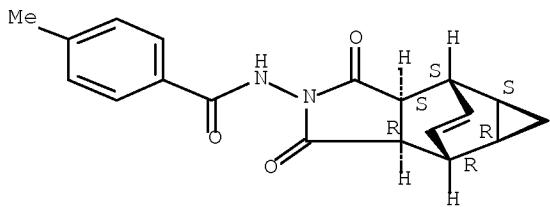
Relative stereochemistry.



RN 959922-95-3 CAPLUS

CN Benzamide, 4-methyl-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

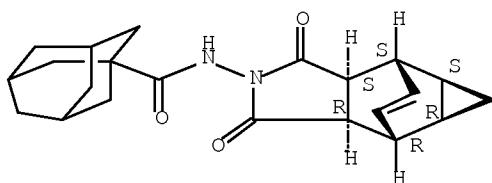
Relative stereochemistry.



RN 959923-00-3 CAPLUS

CN Tricyclo[3.3.1.13,7]decane-1-carboxamide,  
 N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

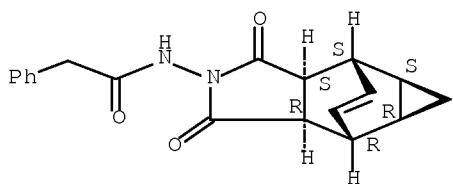
Relative stereochemistry.



RN 959923-03-6 CAPLUS

CN Benzeneacetamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

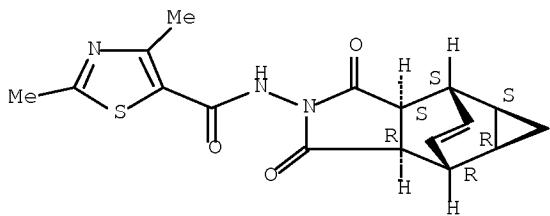
Relative stereochemistry.



RN 959923-20-7 CAPLUS

CN 5-Thiazolecarboxamide, 2,4-dimethyl-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



IT 869572-92-9P

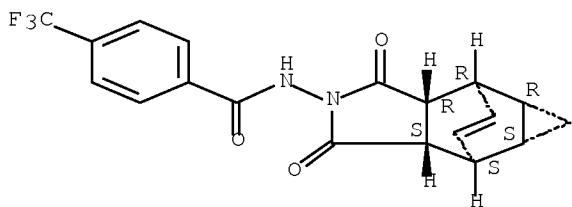
RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of isoindole derivs. for treatment and prevention of orthopoxvirus infections)

RN 869572-92-9 CAPLUS

CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel-(CA INDEX NAME)

Relative stereochemistry.



L3 ANSWER 19 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:1283641 CAPLUS Full-text

DOCUMENT NUMBER: 148:69143

TITLE: Synergistic efficacy of the combination of ST-246 with CMX001 against orthopoxviruses

AUTHOR(S): Quenelle, Debra C.; Prichard, Mark N.; Keith, Kathy A.; Hruby, Dennis E.; Jordan, Robert; Painter, George R.; Robertson, Alice; Kern, Earl R.

CORPORATE SOURCE: University of Alabama School of Medicine, Birmingham, AL, USA

SOURCE: Antimicrobial Agents and Chemotherapy (2007), 51(11), 4118-4124

CODEN: AMACQ; ISSN: 0066-4804

PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The combination of ST-246 and hexadecyloxypropyl-cidofovir or CMX001 was evaluated for synergistic activity in vitro against vaccinia virus and cowpox virus (CV) and in vivo against CV. In cell culture the combination was highly synergistic against both viruses, and the results suggested that combined treatment with these agents might offer superior efficacy in vivo. For animal models, ST-246 was administered orally with or without CMX001 to mice lethally infected with CV. Treatments began 1, 3, or 6 days postinfection using lower

dosages than previously used for single-drug treatment. ST-246 was given at 10, 3, or 1 mg/kg of body weight with or without CMX001 at 3, 1, or 0.3 mg/kg to evaluate potential synergistic interactions. Treatment beginning 6 days post-viral inoculation with ST-246 alone only increased the mean day to death at 10 or 3 mg/kg but had no effect on survival. CMX001 alone also had no effect on survival. When the combination of the two drugs was begun 6 days after viral infection using various dosages of the two, a synergistic reduction in mortality was observed. No evidence of increased toxicity was noted with the combination either in vitro or in vivo. These results indicate that combinations of ST-246 and CMX001 are synergistic both in vitro and in vivo and suggest that combination therapy using ST-246 and CMX001 for treatment of orthopoxvirus disease.

IT 869572-92-9

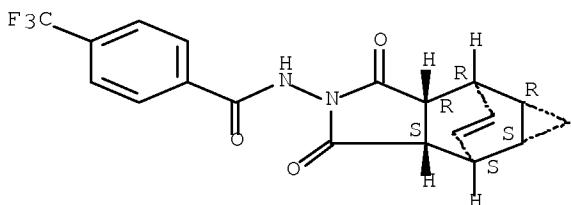
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(ST 246; synergistic efficacy of the combination of ST-246 with CMX001 against orthopoxviruses)

RN 869572-92-9 CAPLUS

CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel-(CA INDEX NAME)

Relative stereochemistry.



OS.CITING REF COUNT: 15 THERE ARE 15 CAPLUS RECORDS THAT CITE THIS RECORD (15 CITINGS)  
 REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 20 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2007:1179956 CAPLUS [Full-text](#)  
 DOCUMENT NUMBER: 148:68745  
 TITLE: The design and development of drugs acting against the smallpox virus

AUTHOR(S): El Omari, Kamel; Stammers, David K.

CORPORATE SOURCE: Division of Structural Biology, The Wellcome Trust Centre for Human Genetics, University of Oxford, Oxford, OX3 7BN, UK

SOURCE: Expert Opinion on Drug Discovery (2007), 2(9), 1263-1272

CODEN: EODDBX; ISSN: 1746-0441

PUBLISHER: Informa Healthcare

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. The eradication of smallpox was announced by the WHO in 1980. However, smallpox has not totally disappeared from people's minds because of its potential use as a biol. weapon. Further outbreaks of smallpox would, needless to say, be devastating in a population, which has little or no immune

defense against the virus. The real concerns come from the fact that the previously used vaccine would not be tolerated today by a number of patients and, more worryingly, there are no approved antiviral drugs against smallpox. This review is focused on the antiviral research, which has been stimulated to deliver potent inhibitors of the replication of the causative agent of smallpox, variola virus.

IT 869572-92-9, ST 246

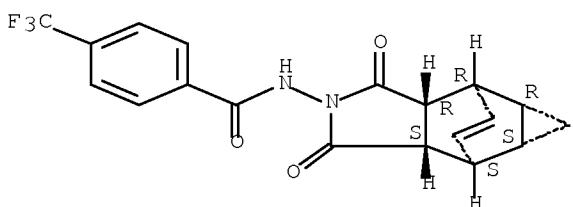
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(ST-246 may be effective in treatment of patient with smallpox)

RN 869572-92-9 CAPLUS

CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel-(CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 21 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:510984 CAPLUS Full-text

DOCUMENT NUMBER: 147:86388

TITLE: Efficacy of the antipoxvirus compound ST-246 for treatment of severe orthopoxvirus infection

AUTHOR(S): Sbrana, Elena; Jordan, Robert; Hruby, Dennis E.; Mateo, Rosa I.; Xiao, Shu-Yuan; Siirin, Marina; Newman, Patrick C.; Da Rosa, Amelia P. A. Travassos; Tesh, Robert B.

CORPORATE SOURCE: Departments of Pathology and Internal Medicine and Center for Biodefense and Emerging Infectious Diseases, University of Texas Medical Branch, Galveston, TX, USA

SOURCE: American Journal of Tropical Medicine and Hygiene (2007), 76(4), 768-773

CODEN: AJTHAB; ISSN: 0002-9637

PUBLISHER: American Society of Tropical Medicine and Hygiene

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Efficacy of the new antipoxvirus compound ST-246 was evaluated as treatment of monkeypox (MPX) virus infection in a ground squirrel model of the disease. Ground squirrels were given a LD of MPX virus and were then treated orally at various times post-inoculation (pi) with 100 mg/kg/day of ST-246. Morbidity and mortality, clin. laboratory results, viral load, and pathol. of placebo and treatment groups were compared. All animals that started treatment with ST-246 on days 0, 1, 2, and 3 pi survived lethal challenge with MPX virus; 67% of animals treated on day 4 pi also survived. In contrast, 100% of the placebo group died. Most of the ST-246-treated animals showed no evidence of

clin. disease or alteration of baseline clin. laboratory values and had minimal histopathol. changes. These results suggest that ST-246 is a promising candidate for early treatment of severe orthopoxvirus infection.

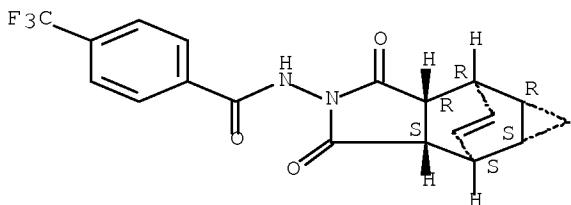
IT 869572-92-9, ST-246

RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(efficacy of antipoxvirus compound ST-246 for treatment of severe monkeypox virus infection in ground squirrel model)

RN 869572-92-9 CAPLUS

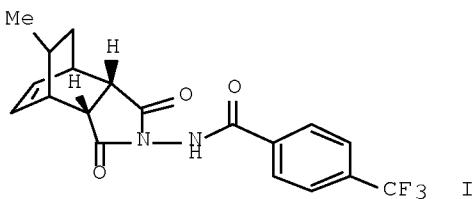
CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel-(CA INDEX NAME)

Relative stereochemistry.



OS.CITING REF COUNT: 15 THERE ARE 15 CAPLUS RECORDS THAT CITE THIS RECORD (15 CITINGS)  
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 22 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2007:242088 CAPLUS Full-text  
DOCUMENT NUMBER: 146:474748  
TITLE: N-(3,3a,4,4a,5,5a,6,6a-Octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2-(1H)-yl)carboxamides: Identification of Novel Orthopoxvirus Egress Inhibitors  
AUTHOR(S): Bailey, Thomas R.; Rippin, Susan R.; Opsitnick, Elizabeth; Burns, Christopher J.; Pevear, Daniel C.; Collett, Marc S.; Rhodes, Gerry; Tohan, Sanjeev; Huggins, John W.; Baker, Robert O.; Kern, Earl R.; Keith, Kathy A.; Dai, Dongcheng; Yang, Guang; Hruby, Dennis; Jordan, Robert  
CORPORATE SOURCE: ViroPharma Incorporated, Exton, PA, 19341, USA  
SOURCE: Journal of Medicinal Chemistry (2007), 50(7), 1442-1444  
CODEN: JMCMAR; ISSN: 0022-2623  
PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 146:474748  
GI



AB A series of novel, potent orthopoxvirus egress inhibitors was identified during high-throughput screening of the ViroPharma small mol. collection. Using structure-activity relationship information inferred from early hits, several compds. were synthesized, and compound 14 was identified as a potent, orally bioavailable first-in-class inhibitor of orthopoxvirus egress from infected cells. Compound (I) has shown comparable efficaciousness in three murine orthopoxvirus models and has entered Phase I clin. trials.

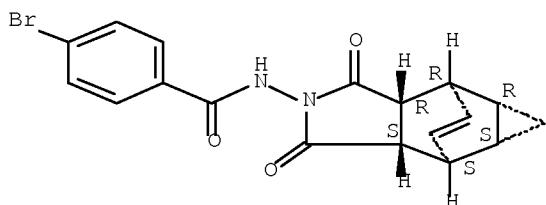
IT 935766-07-7P

RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(octahydrodioxaethenocyclopropisoindol carboxamides as orthopoxvirus egress inhibitors)

RN 935766-07-7 CAPLUS

CN Benzamide, 4-bromo-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

Relative stereochemistry.



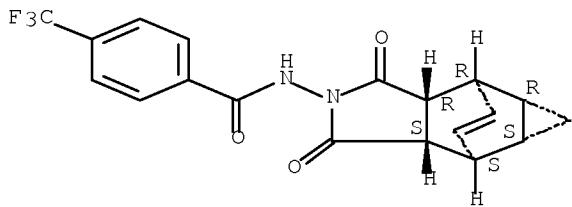
IT 869572-92-9P

RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(octahydrodioxaethenocyclopropisoindol carboxamides as orthopoxvirus egress inhibitors)

RN 869572-92-9 CAPLUS

CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel- (CA INDEX NAME)

Relative stereochemistry.



IT 935765-96-1P 935765-97-2P 935765-98-3P  
 935765-99-4P 935766-00-0P 935766-01-1P  
 935766-02-2P 935766-03-3P 935766-04-4P  
 935766-05-5P 935766-06-6P 935766-09-9P  
 935766-10-2P 935766-11-3P

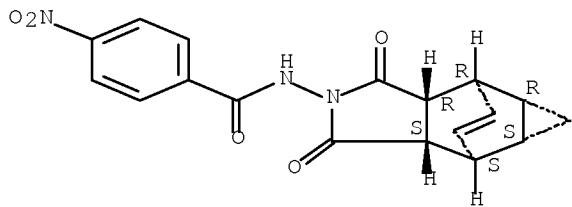
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(octahydrodioxoethenocyclopropisoindol carboxamides as orthopoxvirus egress inhibitors)

RN 935765-96-1 CAPLUS

CN Benzamide, 4-nitro-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

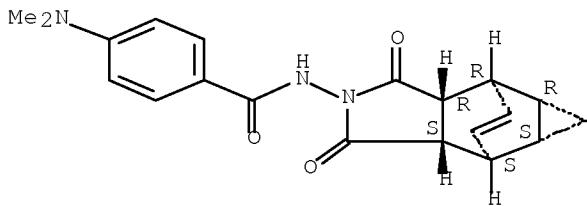
Relative stereochemistry.



RN 935765-97-2 CAPLUS

CN Benzamide, 4-(dimethylamino)-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

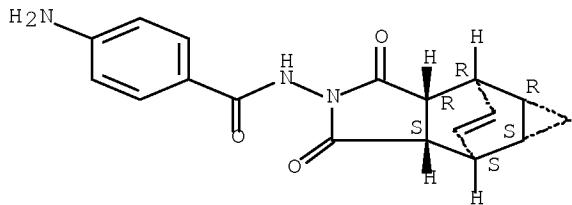
Relative stereochemistry.



RN 935765-98-3 CAPLUS

CN Benzamide, 4-amino-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

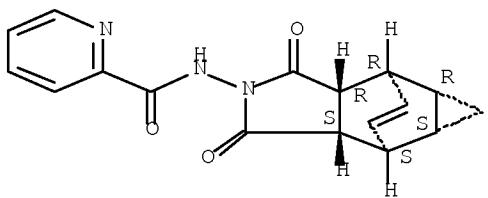
Relative stereochemistry.



RN 935765-99-4 CAPLUS

CN 2-Pyridinecarboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

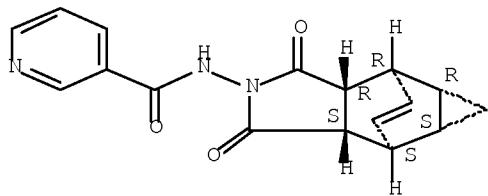
Relative stereochemistry.



RN 935766-00-0 CAPLUS

CN 3-Pyridinecarboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

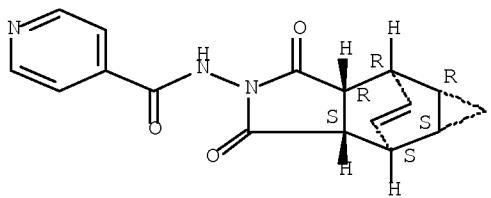
Relative stereochemistry.



RN 935766-01-1 CAPLUS

CN 4-Pyridinecarboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

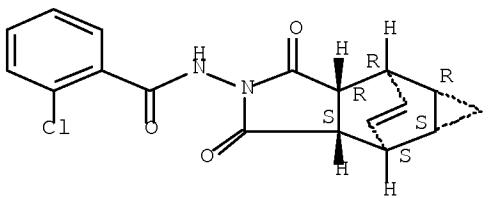
Relative stereochemistry.



RN 935766-02-2 CAPLUS

CN Benzamide, 2-chloro-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

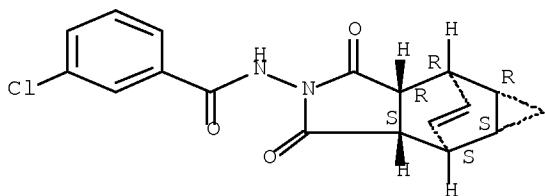
Relative stereochemistry.



RN 935766-03-3 CAPLUS

CN Benzamide, 3-chloro-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

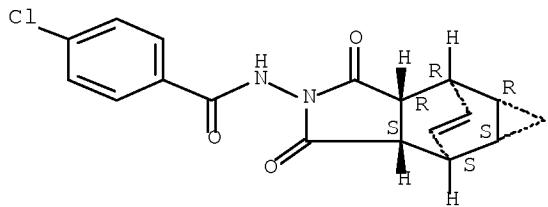
Relative stereochemistry.



RN 935766-04-4 CAPLUS

CN Benzamide, 4-chloro-N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

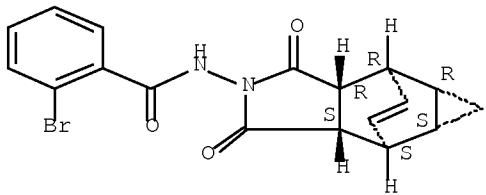
Relative stereochemistry.



RN 935766-05-5 CAPLUS

CN Benzamide, 2-bromo-N-[(3aR, 4R, 4aR, 5aS, 6S, 6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

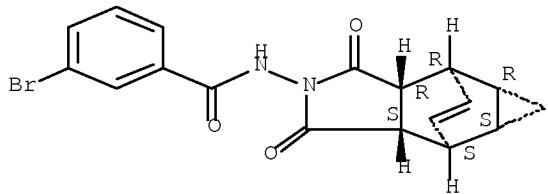
Relative stereochemistry.



RN 935766-06-6 CAPLUS

CN Benzamide, 3-bromo-N-[(3aR, 4R, 4aR, 5aS, 6S, 6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-, rel- (CA INDEX NAME)

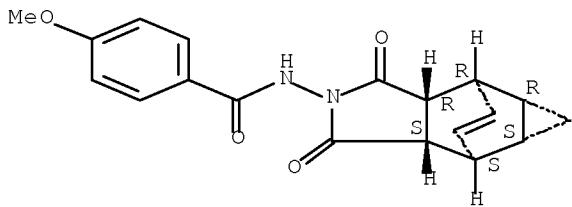
Relative stereochemistry.



RN 935766-09-9 CAPLUS

CN Benzamide, N-[(3aR, 4R, 4aR, 5aS, 6S, 6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-methoxy-, rel- (CA INDEX NAME)

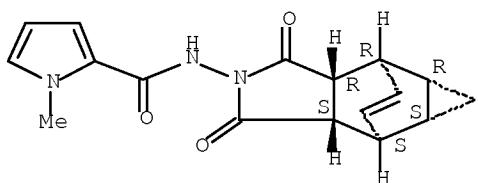
Relative stereochemistry.



RN 935766-10-2 CAPLUS

CN 1H-Pyrrole-2-carboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-1-methyl-,  
rel- (CA INDEX NAME)

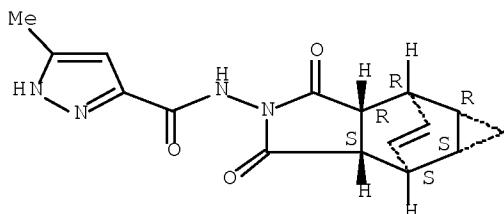
Relative stereochemistry.



RN 935766-11-3 CAPLUS

CN 1H-Pyrazole-3-carboxamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-5-methyl-,  
rel- (CA INDEX NAME)

Relative stereochemistry.



OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD  
(6 CITINGS)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 23 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:148013 CAPLUS [Full-text](#)

DOCUMENT NUMBER: 146:197856

TITLE: Efficacy of delayed treatment with ST-246 given orally  
against systemic orthopoxvirus infections in mice

AUTHOR(S): Quenelle, Debra C.; Buller, R. M. L.; Parker, Scott;  
Keith, Kathy A.; Hruby, Dennis E.; Jordan, Robert;  
Kern, Earl R.

CORPORATE SOURCE: University of Alabama School of Medicine, Birmingham, AL, USA

SOURCE: Antimicrobial Agents and Chemotherapy (2007), 51(2), 689-695

CODEN: AMACCQ; ISSN: 0066-4804

PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB ST-246 was evaluated for activity against cowpox virus (CV), vaccinia virus (VV), and ectromelia virus (ECTV) and had an in vitro 50% effective concentration (EC50) of 0.48  $\mu$ M against CV, 0.05  $\mu$ M against VV, and 0.07  $\mu$ M against ECTV. The selectivity indexes were >208 and >2,000 for CV and VV, resp. The in vitro antiviral activity of ST-246 was significantly greater than that of cidofovir, which had an EC50 of 41.1  $\mu$ M against CV and 29.2  $\mu$ M against VV, with selectivity indexes of >7 and >10, resp. ST-246 administered once daily by oral gavage to mice infected intranasally with CV beginning 4 h or delayed until 72 h postinoculation was highly effective when given for a 14-day duration using 100, 30, or 10 mg/kg of body weight. When 100 mg/kg of ST-246 was administered to VV-infected mice, a duration of 5 days was sufficient to significantly reduce mortality even when treatment was delayed 24 h postinoculation. Viral replication in liver, spleen, and kidney, but not lung, of CV- or VV-infected mice was reduced by ST-246 compared to levels for vehicle-treated mice. When 100 mg/kg of ST-246 was given once daily to mice infected by the intranasal route with ECTV, treatment for 10 days prevented mortality even when treatment was delayed up to 72 h after viral inoculation. Viral replication in target organs of ECTV-infected mice was also reduced.

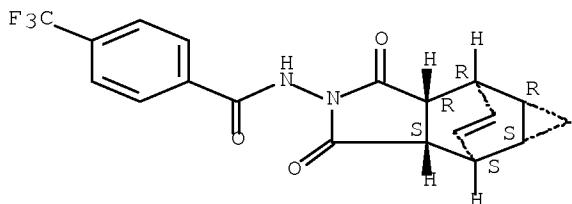
IT 869572-92-9, ST 246

RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (ST 246; delayed treatment with ST-246 against systemic orthopoxvirus infections)

RN 869572-92-9 CAPLUS

CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel-(CA INDEX NAME)

Relative stereochemistry.



OS.CITING REF COUNT: 25 THERE ARE 25 CAPLUS RECORDS THAT CITE THIS RECORD (25 CITINGS)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 24 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:1111364 CAPLUS Full-text

DOCUMENT NUMBER: 144:228

TITLE: An orally bioavailable antipoxvirus compound (ST-246) inhibits extracellular virus formation and protects

AUTHOR(S): mice from lethal orthopoxvirus challenge  
Yang, Guang; Pevear, Daniel C.; Davies, Marc H.;  
Collett, Marc S.; Bailey, Tom; Rippen, Susan; Barone,  
Linda; Burns, Chris; Rhodes, Gerry; Tohan, Sanjeev;  
Huggins, John W.; Baker, Robert O.; Buller, R. L.  
Mark; Touchette, Erin; Waller, Kem; Schriewer, Jill;  
Neyts, Johan; DeClercq, Erik; Jones, Kevin; Hruby,  
Dennis; Jordan, Robert

CORPORATE SOURCE: ViroPharma, Inc., Exton, PA, USA

SOURCE: Journal of Virology (2005), 79(20), 13139-13149

CODEN: JOVIAM; ISSN: 0022-538X

PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal

LANGUAGE: English

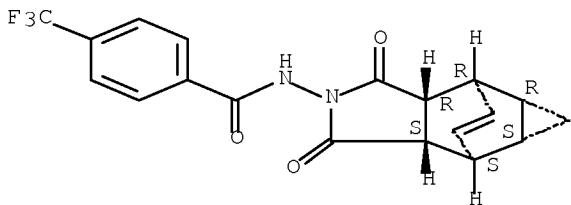
AB ST-246 is a low-mol.-weight compound (mol. weight = 376), that is potent (concentration that inhibited virus replication by 50% = 0.010  $\mu$ M), selective (concentration of compound that inhibited cell viability by 50% = >40  $\mu$ M), and active against multiple orthopoxviruses, including vaccinia, monkeypox, camelpox, cowpox, ectromelia (mousepox), and variola viruses. Cowpox virus variants selected in cell culture for resistance to ST-246 were found to have a single amino acid change in the V061 gene. Reengineering this change back into the wild-type cowpox virus genome conferred resistance to ST-246, suggesting that V061 is the target of ST-246 antiviral activity. The cowpox virus V061 gene is homologous to vaccinia virus F13L, which encodes a major envelope protein (p37) required for production of extracellular virus. In cell culture, ST-246 inhibited plaque formation and virus-induced cytopathic effects. In single-cycle growth assays, ST-246 reduced extracellular virus formation by 10-fold relative to untreated controls, while having little effect on the production of intracellular virus. In vivo oral administration of ST-246 protected BALB/c mice from lethal infection, following intranasal inoculation with 10+ 50% LD (LD50) of vaccinia virus strain IHD-J. ST-246-treated mice that survived infection acquired protective immunity and were resistant to subsequent challenge with a LD (10+ LD50) of vaccinia virus. Orally administered ST-246 also protected A/NCr mice from lethal infection, following intranasal inoculation with 40,000+ LD50 of ectromelia virus. Infectious virus titers at day 8 postinfection in liver, spleen, and lung from ST-246-treated animals were below the limits of detection (<10 PFU/mL). In contrast, mean virus titers in liver, spleen, and lung tissues from placebo-treated mice were 6.2 + 107, 5.2 + 107, and 1.8 + 105 PFU/mL, resp. Finally, oral administration of ST-246 inhibited vaccinia virus-induced tail lesions in Naval Medical Research Institute mice inoculated via the tail vein. Taken together, these results validate F13L as an antiviral target and demonstrate that an inhibitor of extracellular virus formation can protect mice from orthopoxvirus-induced disease.

IT 869572-92-9, ST 246  
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(orally bioavailable antipoxvirus compound (ST-246) inhibits extracellular virus formation and protects mice from lethal orthopoxvirus challenge)

RN 869572-92-9 CAPLUS

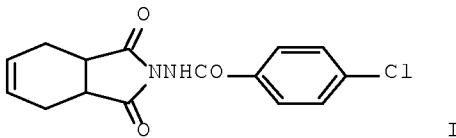
CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel-(CA INDEX NAME)

Relative stereochemistry.

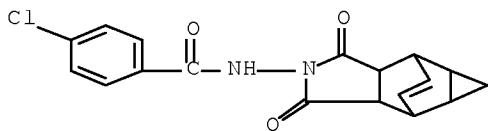


OS.CITING REF COUNT: 56 THERE ARE 56 CAPLUS RECORDS THAT CITE THIS RECORD (56 CITINGS)  
 REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 25 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2005:1030330 CAPLUS [Full-text](#)  
 DOCUMENT NUMBER: 144:311868  
 TITLE: N-Alkylation of N-(2,5-dioxo-1-pyrrolidinyl)benzamides  
 AUTHOR(S): Kolobov, A. V.; Panfilov, S. T.; Borisov, P. V.;  
 Ovchinniukov, K. L.; Chochlev, A. L.; Danilova, A. S.;  
 Kofanov, E. R.  
 CORPORATE SOURCE: Yarosl. Gos. Tekh. Univ., Yadroslavl, Russia  
 SOURCE: Izvestiya Vysshikh Uchebnykh Zavedenii, Khimiya i  
 Khimicheskaya Tekhnologiya (2004), 47(6), 120-123  
 CODEN: IVUKAR; ISSN: 0579-2991  
 PUBLISHER: Ivanovskii Gosudarstvennyi Khimiko-Tekhnologicheskii  
 Universitet  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 OTHER SOURCE(S): CASREACT 144:311868  
 GI

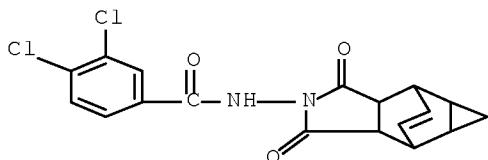


AB Title compds. such as I were alkylated on the amide N atom by benzyl bromides and phenacyl bromides.  
 IT 313270-75-6 879504-84-4  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (N-alkylation of N-(2,5-dioxo-1-pyrrolidinyl)benzamides)  
 RN 313270-75-6 CAPLUS  
 CN Benzamide, 4-chloro-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



RN 879504-84-4 CAPLUS

CN Benzamide, 3,4-dichloro-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



L3 ANSWER 26 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:1156449 CAPLUS Full-text

DOCUMENT NUMBER: 142:86610

TITLE: Compounds, compositions and methods for treatment and prevention of orthopoxvirus infections and associated diseases using di-, tri-, and tetracyclic acylhydrazide derivatives and analogs

INVENTOR(S): Jordan, Robert; Bailey, Thomas R.; Rippin, Susan R.

PATENT ASSIGNEE(S): Viropharma Incorporated, USA

SOURCE: PCT Int. Appl., 55 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004112718	A2	20041229	WO 2004-US19552	20040618
WO 2004112718	A3	20050407		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004249250	A1	20041229	AU 2004-249250	20040618
CA 2529761	A1	20041229	CA 2004-2529761	20040618
EP 1638938	A2	20060329	EP 2004-776765	20040618

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK  
 JP 2007521273 T 20070802 JP 2006-517409 20040618  
 US 20060235051 A1 20061019 US 2006-561153 20060405  
 US 20080103181 A9 20080501  
 US 20070287735 A1 20071213 US 2007-785998 20070423  
 US 20080004452 A1 20080103 US 2007-785997 20070423  
 PRIORITY APPLN. INFO.: US 2003-480182P P 20030620  
 WO 2004-US19552 W 20040618  
 US 2006-561153 A2 20060405

OTHER SOURCE(S): MARPAT 142:86610

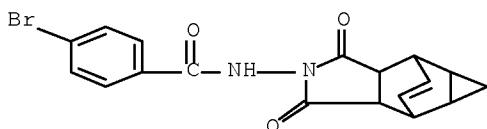
AB Methods of using di, tri, and tetracyclic acylhydrazide derivs. and analogs, as well as pharmaceutical compns. containing the same, are disclosed for the treatment or prophylaxis of viral infections and diseases associated therewith, particularly those viral infections and associated diseases caused by the orthopoxvirus. 4-Trifluoromethyl-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)benzamide (prepared from cycloheptatriene, maleic anhydride and 4-trifluoromethylbenzhydrazide in two steps) inhibited vaccinia virus and cowpox virus with EC50 values of <0.5  $\mu$ M.

IT 302780-38-7P 313270-75-6P 323177-91-9P  
 323203-24-3P 342417-34-9P 342417-71-4P  
 432022-23-6P 432022-24-7P 816458-32-9P  
 816458-33-0P 816458-34-1P 816458-35-2P  
 816458-36-3P 816458-42-1P 816458-57-8P  
 869572-92-9P

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);  
 SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study);  
 PREP (Preparation); USES (Uses)  
 (di-, tri-, and tetracyclic acylhydrazide derivs. and analogs for treatment and prevention of orthopoxvirus infections and associated diseases)

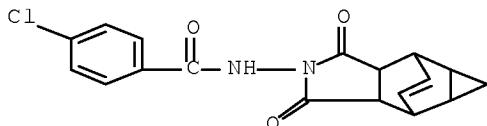
RN 302780-38-7 CAPLUS

CN Benzamide, 4-bromo-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)

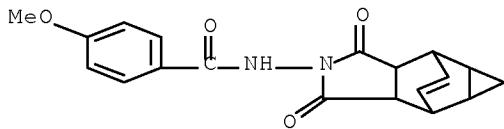


RN 313270-75-6 CAPLUS

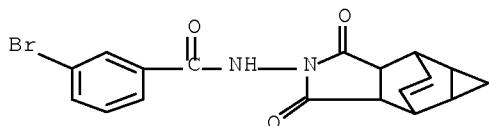
CN Benzamide, 4-chloro-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



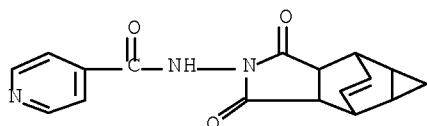
RN 323177-91-9 CAPLUS  
CN Benzamide, 4-methoxy-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



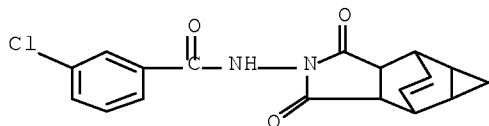
RN 323203-24-3 CAPLUS  
CN Benzamide, 3-bromo-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



RN 342417-34-9 CAPLUS  
CN 4-Pyridinecarboxamide, N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)

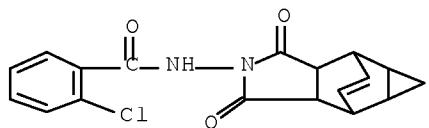


RN 342417-71-4 CAPLUS  
CN Benzamide, 3-chloro-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



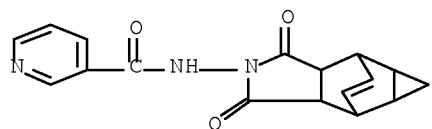
RN 432022-23-6 CAPLUS  
CN Benzamide, 2-chloro-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-

ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



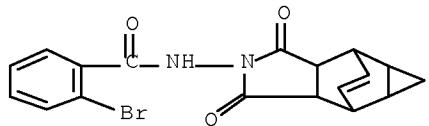
RN 432022-24-7 CAPLUS

CN 3-Pyridinecarboxamide, N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



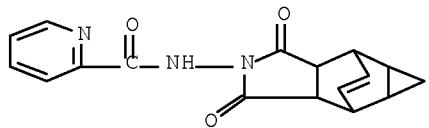
RN 816458-32-9 CAPLUS

CN Benzamide, 2-bromo-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



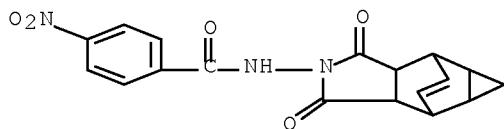
RN 816458-33-0 CAPLUS

CN 2-Pyridinecarboxamide, N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



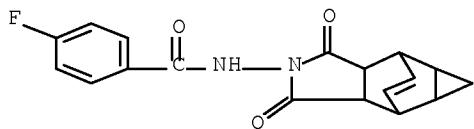
RN 816458-34-1 CAPLUS

CN Benzamide, 4-nitro-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



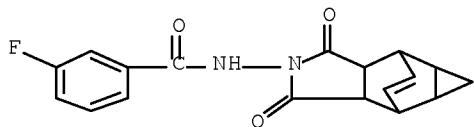
RN 816458-35-2 CAPLUS

CN Benzamide, 4-fluoro-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



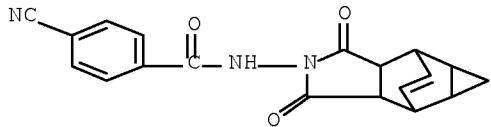
RN 816458-36-3 CAPLUS

CN Benzamide, 3-fluoro-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



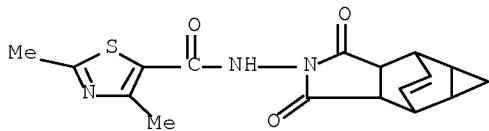
RN 816458-42-1 CAPLUS

CN Benzamide, 4-cyano-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



RN 816458-57-8 CAPLUS

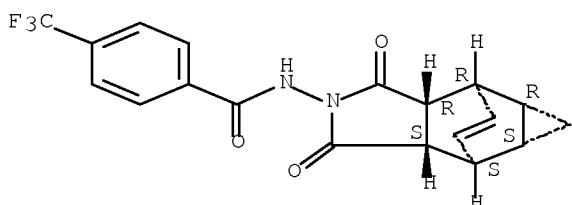
CN 5-Thiazolecarboxamide, 2,4-dimethyl-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



RN 869572-92-9 CAPLUS

CN Benzamide, N-[(3aR,4R,4aR,5aS,6S,6aS)-3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl]-4-(trifluoromethyl)-, rel-(CA INDEX NAME)

Relative stereochemistry.



IT 330625-18-8 342417-37-2 342417-72-5

816458-49-8 816458-51-2 816458-52-3

816458-53-4 816458-54-5 816458-55-6

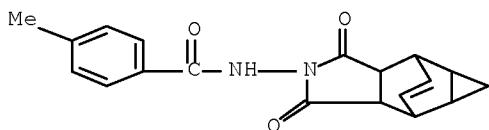
816458-56-7

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(di-, tri-, and tetracyclic acylhydrazide derivs. and analogs for treatment and prevention of orthopoxvirus infections and associated diseases)

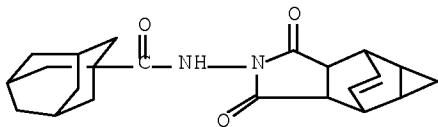
RN 330625-18-8 CAPLUS

CN Benzamide, 4-methyl-N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)

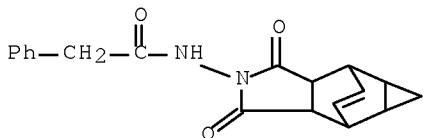


RN 342417-37-2 CAPLUS

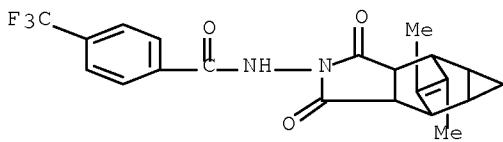
CN Tricyclo[3.3.1.13,7]decane-1-carboxamide,  
N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



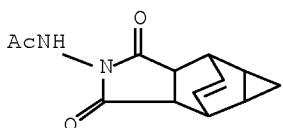
RN 342417-72-5 CAPLUS  
 CN Benzeneacetamide, N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



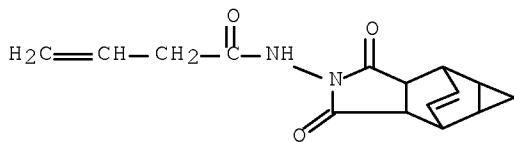
RN 816458-49-8 CAPLUS  
 CN Benzamide, N-(3,3a,4,4a,5,5a,6,6a-octahydro-7,8-dimethyl-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)-4-(trifluoromethyl)- (CA INDEX NAME)



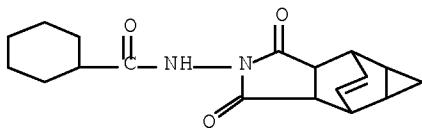
RN 816458-51-2 CAPLUS  
 CN Acetamide, N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



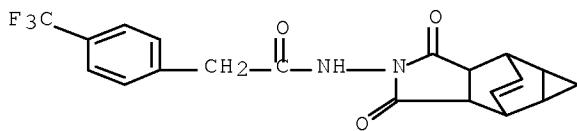
RN 816458-52-3 CAPLUS  
 CN 3-Butenamide, N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



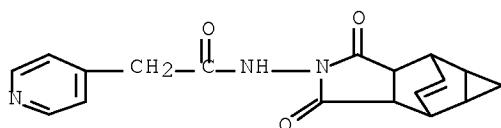
RN 816458-53-4 CAPLUS  
 CN Cyclohexanecarboxamide, N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



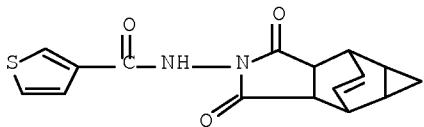
RN 816458-54-5 CAPLUS  
 CN Benzeneacetamide, N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)-4-(trifluoromethyl)- (CA INDEX NAME)



RN 816458-55-6 CAPLUS  
 CN 4-Pyridineacetamide, N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)

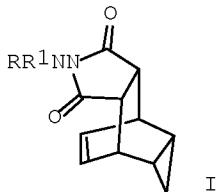


RN 816458-56-7 CAPLUS  
 CN 3-Thiophenecarboxamide, N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)- (CA INDEX NAME)



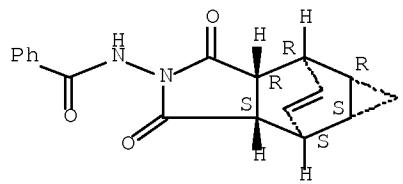
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 27 OF 27 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1979:22169 CAPLUS Full-text  
 DOCUMENT NUMBER: 90:22169  
 ORIGINAL REFERENCE NO.: 90:3647a,3650a  
 TITLE: Restricted rotations in configurational assignments:  
 the Diels-Alder adduct of 1,3,5-cycloheptatriene and  
 maleic anhydride  
 AUTHOR(S): Verma, Shiva Mohan; Singh, M. Dhaneshwar  
 CORPORATE SOURCE: Dep. Chem., Banaras Univ., Varanasi, India  
 SOURCE: Recueil des Travaux Chimiques des Pays-Bas (1978),  
 97(9), 238-41  
 CODEN: RTCPA3; ISSN: 0034-186X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI



AB The configuration of the Diels-Alder adduct of 1,3,5-cycloheptatriene and maleic anhydride was investigated using  $^1\text{H}$ -NMR spectroscopy. While nonplanar conformations about the N-N' bond in N-(diacylamino)imides I ( $\text{R}, \text{R}1 = \text{H}, \text{Ac}, \text{Bz}$ , etc.) of the adduct were utilized in establishing the orientation of the anhydride ring, bromination of the double bond of the adduct exo-cis addition demonstrated the configuration of the cyclopropane ring.  
 IT 68406-74-6P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and IR and NMR spectrum of)  
 RN 68406-74-6 CAPLUS  
 CN Benzamide, N-(3,3a,4,4a,5,5a,6,6a-octahydro-1,3-dioxo-4,6-ethenocycloprop[f]isoindol-2(1H)-yl)-,  
 (3aa,4 $\beta$ ,4aa,5aa,6 $\beta$ ,6aa)- (9CI) (CA  
 INDEX NAME)

Relative stereochemistry.



=> log off

ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF

LOGOFF? (Y)/N/HOLD:y

STN INTERNATIONAL LOGOFF AT 13:27:46 ON 05 AUG 2009